OHIO STATE UNIVERSITY
NOV 19 1937
LIBRARY

F43
V.90

FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

90, No. 11 NOVEMBER, 1937 Member A.B.C.–A.B.P.

The Result of an Explosion and Fire in a Celluloid Shipping and Storage Plant at Newark, N. J.

Every Fire Fighter

Should Have These Books

Questions and Answers for Battalion and Deputy Chiefs

by Geo. J. Kuss, Former Deputy Chief N. Y. F. D., and Fred Shepperd, B.Sc., M.E., Managing Editor, FIRE ENGINEERING. It contains 210 pages of invaluable instruction for progressive fire department officers, and is indispensable for Captains, Battalion and Deputy Chiefs and other officers studying for promotion.

It contains questions from promotional examinations throughout the country, with answers by Deputy Chief Kuss (N. Y. F. D.), and Fred Shepperd. Price $2.00 — postpaid $2.15.

Questions and Answers for Lieutenant and Captain

by George J. Kuss, Former Deputy Chief N. Y. F. D., and Fred Shepperd. A 290-page book of promotional questions and answers for candidates for lieutenants and captains.

It includes questions asked at promotional examinations in practically every city in the country where civil service examinations are held, with answers by Chief Kuss and our Editor. Price $2.50—postpaid $2.65.

Simplified Fire Department Hydraulics

BY FRED SHEPPERD, B. Sc., M. E.

A brand new book describing in a simplified method all of the rules and formulæ required in the solution of fire department promotional examination questions in hydrauiics.

Also contains nearly 200 problems on hydraulics asked in examinations in large departments throughout the country. 170 pages fully illustrated. Price $2—postpaid $2.15.

Use This Coupon to Order Your Copies

Book Department
Case-Shepperd-Mann Pub. Corp.
24 W. 40th St., New York

Gentlemen: I am enclosing $.....money order (or check), for which please send me the following:

.....Copies of "Questions and Answers for Lieutenant and Captain" at $2.65 each.

.....Copies of "Simplified Fire Department Hydraulics" at $2.15 each.

.....Copies of "Questions and Answers for Battalion and Deputy Chief" at $2.15 each.

Name..... Rank.....

Address.....Date.....

Here's Why

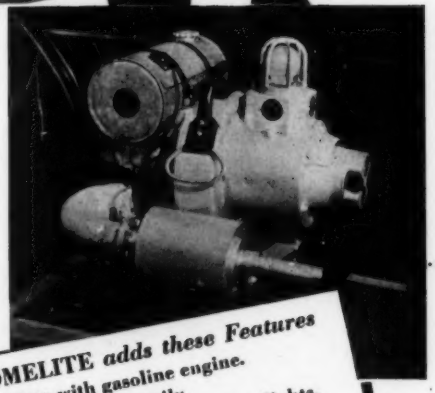
HOMELITE Portable Floodlighting

is Used the Country Over . . .

It's no wonder that Homelite floodlighting units are so widely used. For these low cost lighting plants have *all the features*—light weight, quick starting, automatic, dependable operation, large capacity, sturdy construction—that makes them invaluable to the many hundreds of Homelite-equipped fire departments.

Weighing only 89 pounds complete with built-in gasoline engine — a Homelite is easily carried by one man — quickly set up and started instantly right where it's most needed. And it generates 1,250 watts — runs several large floodlights continuously — automatically — even under the toughest conditions.

Moreover, at a small fraction of the cost of a floodlighting truck, a Homelite offers many advantages over larger equipment. In fact, many companies supplement floodlighting trucks with Homelites for the sake of flexibility. Without long cables, a Homelite can be placed in front, in back, or inside a building. For overhaul work it can be left behind without delaying other equipment. When not in use, it rides the running board.



To Low Cost—HOMELITE adds these Features

- Weighs 89 lbs., complete with gasoline engine.
- One man can carry it anywhere—easily.
- Generates 1250 watts—enough for several floodlights.
- No control board, rheostats or meters to operate.
- Starts easily at 20° below zero—or in the rain.
- Improved choke design prevents flooding.
- Air-cooled engine can't freeze or overheat.
- Entire unit is waterproof, dustproof, and oilproof.
- Anybody can start it in from five to 15 seconds.
- Great dependability—the result of building over 20,000 Homelites.

Get the complete facts on Homelite floodlighting. Write for bulletin today. No obligation.

HOMELITE CORPORATION
912 Riverdale Avenue
Port Chester, New York

MORE HOMELITES IN FIRE-FIGHTING SERVICE THAN ALL OTHER MAKES COMBINED

A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

ROBERT H. LOCKWOOD
Associate Editor

FRED SHEPPERD
Editor

N. N. WOLPERT
Assistant Editor

—And Thanks Again!

TO the many readers and advertisers who wrote such nice letters complimenting our 60th Anniversary - Fire Chiefs Convention Number last month, we express our deepest appreciation.

●Here are a few of the typical comments:

"Not only the best issue of your magazine we have ever seen but also the finest so-called trade paper it has ever been our pleasure to read."

"The best fire paper you or anyone else has ever published."

"Your October issue beats anything you have ever gotten out in the many years I have read FIRE ENGINEERING."

"Everything in the issue, even the advertising, is extremely interesting. It certainly is a beauty."

"A splendid issue—do not recall any quite as nice."

●We tried to do a specially good job and it naturally makes us happy that our efforts were so enthusiastically received.

The Publishers

IN THIS ISSUE

VOL. 90 November, 1937 No. 11

	Page
With the Editor I. A. F. C. Gains—A Daring Innovation By Fred Sheppard	589
In Time of Peace Prepare for War By Chief John J. McElligott and I. H. Case	590
I. A. F. C. Moves Ahead Staff Report of Chiefs' Convention and List of Those Present	593
Promotional Study Course	600
The Round Table Department Discussion on Response to Telephoned Fire Alarms Continued	602
Questions and Answers	608
The Cover By William Paul Babcock	609
The Watch Desk By Roy B. Woolley	610
What's Burning	611
Manufacturers' Announcements	622
Convention Dates	622
False Alarm Humorous Side of the Fire-Fighting Profession	628

MEMBER
Audit Bureau of Circulations
Associated Business Papers

Published the tenth of each month by
CASE-SHEPPERD-MANN PUBLISHING CORPORATION
Also publishers of "Water Works Engineering" and "Municipal Sanitation"
General Offices—24 West 40th Street, New York

SUBSCRIPTION PRICE
U. S. and Canada, $2 a year;
Foreign, $3; Single Copies, 25c

KARL M. MANN, President
I. HERBERT CASE, Vice-Pres. and General Manager
JESSE H. NEAL, Vice-President

W. J. GIBSON, Advertising Manager; ALFRED J. HOUGHTON, Eastern Representative; H. S. ESSEX, Production Manager

CHICAGO: 6 N. Michigan Ave.—W. S. CLEVENGER, L. M. ROCHE; SAN FRANCISCO: 444 Market St.—CHARLES H. WOOLLEY; H. N. HARNER

Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under the Act of March 3, 1879.
Contents of this issue copyrighted, 1937, by the Case-Shepperd-Mann Publishing Corporation.

AHRENS-FOX AWARDED CONTRACT FOR FIVE PUMPERS BY NEW YORK WORLD'S FAIR!

Intensive Investigation Brings Out Facts of Ahrens-Fox Long and Successful Records Under Extraordinary Demands of World's Greatest Metropolis

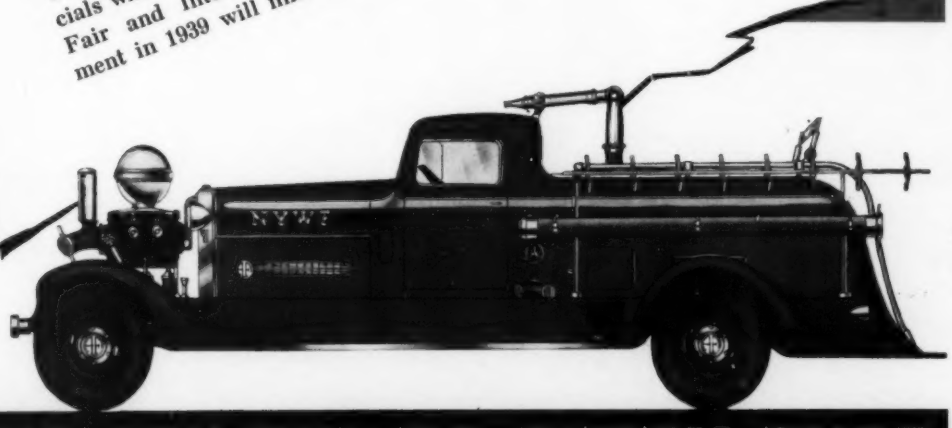
AFTER an intensive investigation, a contract for five units of apparatus to be built according to specifications prepared by Chief T. F. Dougherty* and approved by Chief and Commissioner John J. McElligott has been awarded by the New York World's Fair to The Ahrens-Fox Fire Engine Company of Cincinnati.

The thousands of firemen and fire officials who attend the New York World's Fair and International Fire Tournament in 1939 will find on the Grounds of the 1200-acre Flushing Meadow Park the largest, most completely equipped and highly trained semi-public Fire Brigade ever organized.

Housed in four stations—one of them an $80,000 permanent building—manned by 125 officers and men detailed by the New York Fire Department, and equipped exclusively with Ahrens-Fox apparatus, the World's Fair Fire Department will spread the fame and prestige of the American fire service throughout the world.

*Retired Assistant Chief, F. D. N. Y. Now in charge of World's Fair Fire Protection.

IF your community, too, needs fire fighting equipment, you will serve the interests of your constituents best by getting in touch with Ahrens-Fox.



AHRENS-FOX BUILDS EVERY TYPE OF PUMP FOR EVERY KIND OF SERVICE!

The Ahrens-Fox Fire Engine Co., Cincinnati, O.

The History of Gamewell Is The

71 YEARS EXPERIENCE BACK GAMEWELL PRODUCTS

The first Gamewell Fire Alarm Telegraph System was installed in Boston, Mass., in 1851. Interrupted during the Civil War, the business was resumed in 1866, and from that day forward the name Gamewell has been synonymous with Fire Alarm Development in the United States.

HIGHLIGHTS OF GAMEWELL HISTORY

1851—Installation of the first Gamewell System.
1866—The Gamewell Company founded.
1875—The automatic fire alarm repeater developed.
1880—The non-interfering box developed.
1883—Master box and auxiliary systems for private properties.
1899—Application of storage battery to fire alarm systems.
1896—Positive Non-Interfering Successive Box.
1915—Peerless Single-Fold Boxes—high insulation.
1930—Three-Fold Fire Alarm System.
1936—Vitaguard Fire Alarm System for small municipalities.
1937—Constantly increasing Gamewell sales.

THE GAMEWELL COMPANY

BRANCH OFFICES

Grand Central Terminal
New York, N. Y.

1402 Park Building
Pittsburgh, Pa.

3209 Ross Avenue
Dallas, Texas

1741 Arapahoe Street
Denver, Colorado

407 South Dearborn Street
Chicago, Illinois

561 Chamber of Commerce Bldg.
Los Angeles, California

Peters Building
Atlanta, Georgia

1125 Pingree Avenue
Detroit, Michigan

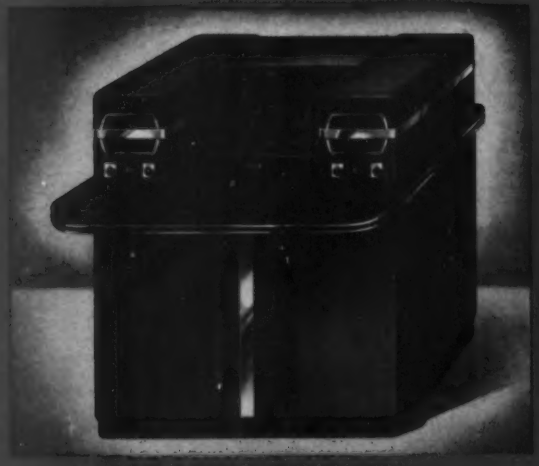
THREE-FOLD FIRE ALARM SYSTEM

THREE-FOLD
FIRE ALARM BOX

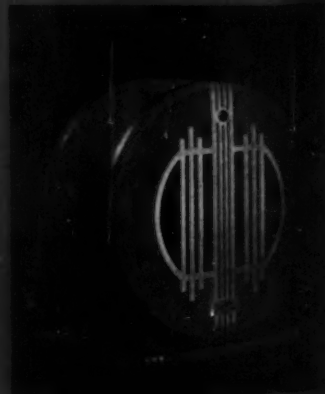
THREE FOLD CENTRAL STATION

TURTLE GONG

FIRE ALARM
REGISTER



VOCALARM CONTROL UNIT



LOUD SPEAKER

DEPENDABLE FIRE ALARM BOXES SAVE LIFE AND PROPERTY

An efficient Fire Alarm System with ADEQUATE Box Distribution—not only protects property and life—but also protects the residential and industrial GROWTH of the community with all the attendant increase in social expansion, wages, and taxes!

VITAGUARD FIRE ALARM SYSTEMS FOR VOLUNTEER FIRE DEPARTMENTS

For small cities and towns, Vitaguard is the latest outstanding development in the fire alarm field, embracing many novel features. For complete descriptive information, write the company or any of its branch offices. The Vitaguard system is the latest development in the fire alarm field.

Catalogs and full information on Gamewell Products gladly sent on request.

NEWTON UPPER FALLS, MASS.

FOREIGN REPRESENTATIVES

Northern Electric Company
Montreal, Quebec, Canada

Duplex Fire Alarm Company
Wellington, New Zealand

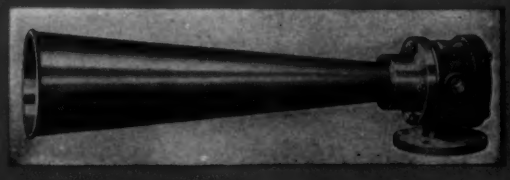
General Fire Appliances Co., Ltd.
Johannesburg, South Africa

Mario Barros do Amaral
Sao Paulo, Brazil

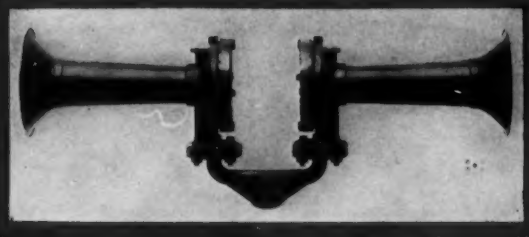
Distribuidores, S. A.
Havana, Cuba

International Standard Electric Co.
New York, N. Y.

VITAGUARD FIRE ALARM SYSTEM



DIAPHONE HORN, TYPE B



TWO-WAY AIR HORN, TYPE F

VITAGUARD CONTROL UNIT

VITAGUARD BOX

You FIRE CHIEFS of AMERICA

have put AMERICAN LAFRANCE in front

It's the Fire Chiefs of America whose foresight and experience have put American-LaFrance to the supreme test and proved its right to leadership.

It was no accident that at your convention in Oklahoma City an American-LaFrance centrifugal pump was able to operate dry for fifty-three consecutive hours, at 1750 R.P.M. without damage to the pump.

After the dry test, a pumping test at Headquarters Fire Station conclusively demonstrated that neither packings nor bearings had been affected. The pump even demonstrated its ability to prime at a ten foot lift with one of the discharge gates fully open.

Only an American-LaFrance centrifugal pump can duplicate this performance. No open discharge gate, or pump drain valve; no leak at a suction gasket, or restricted suction strainer can cause pump seizure.

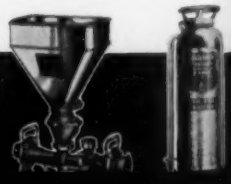
You know, better than anyone else, that American-LaFrance Built-in Quality will not fail in *any* emergency — that American-LaFrance built apparatus, with our knowledge of your requirements, means absolute dependability.

American-LaFrance is Headquarters for Extinguishers to fight every type of fire, and for Fire Department Supplies — as well as for Apparatus.

AMERICAN-LAFRANCE AND FOAMITE INDUSTRIES, INC.

ELMIRA, NEW YORK, U.S.A.

Always in Front



CHEMICAL ENGINEERING LIBRARY

FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 90 NOVEMBER, 1937 No. 11

WITH THE EDITOR

I. A. F. C. Gains The Sixty-Fifth Annual Conference of the International Association of Fire Chiefs, held late last month at Oklahoma City, Oklahoma, proved in very convincing manner that the Organization is gaining rapidly in strength. A registration of nearly 20% above that of last year, an increase in membership during the year of over 600 and about double the number of exhibits of any convention for the previous five years speak eloquently for the progress being made.

The technical sessions of the Conference were highly successful. Between 400 and 450 members attended each meeting, which represents about 90% average attendance. To conduct a Round Table session in the evening and hold the group, with but few desertions, until 11:30 p.m. speaks volumes for the interest of the members in getting the most out of the Conference.

All sessions were conducted in a most businesslike manner by President Bogan, who made an outstanding presiding officer. Of course, credit for the success of this year's meeting must be divided among many. To Chief George Goff of Oklahoma City, the host, to Chairman J. J. McElligott of the Membership and Convention Attendance Committee, to President Bogan's official family, to Sergeant-at-Arms George Morley and to others the Association's thanks is due for the effective work done both at the meeting and during the year.

And last, but not least, Dr. Harry M. Archer, Dr. Dave Price, and the other speakers on the program deserve a lot of credit for presenting the Association with one of the finest educational programs ever enjoyed by the membership.

This year's meeting is now history. The 1938 meeting should excel it in all respects, for the Association is now on the up!

* * *

A Daring Innovation During Fire Prevention week the owner of a motion picture theatre in a small southern city, in cooperation with the Fire Department, staged a fire drill in the theatre when it was well filled with children.

Outside of a few remarks on fire drills, apparently as part of the city-wide fire prevention activities of the week, no mention was made of the impending fire drill.

An alarm of fire was given. The audience was asked to leave the building quickly. Apparatus rolled up in front of the theatre. Despite the excitement, the youngsters cleared out of the building rapidly.

Though this particular drill was a success, there seems to be possibility of catastrophe, though remote, by such an affair getting out of hand.

Where fire drills are to be conducted in places of public assembly that have not previously had them, it might be well to fully forewarn those persons to be involved, at least for the first few times. Such a procedure would serve as effective insurance against panic.

Fred Shepperd

Preparing For War Emergencies

It Is Best for Fire Departments to Look Ahead and Be Prepared to Meet Great Emergencies When They Arrive

By JOHN J. McELLIGOTT
Fire Chief and Commissioner, New York City
and
I. H. CASE
Vice-President and General Manager
FIRE ENGINEERING, New York City

The Plane as a War Peril
A Spanish Government plane bombing a rebel position and the effects of the explosion of the missile.

THERE is an old saying, "They who are best equipped for war have it most in their power to live in peace."

With military preparations going on feverishly everywhere on an unprecedented scale, with science advancing in leaps and bounds in the development of bigger and more terrible tools of destruction, a large part of the world today is literally sitting on a powder keg and waiting momentarily for the major explosion that we fervently hope may be averted. If the big bang comes, maybe this country will be drawn in and maybe it won't.

Airplanes are rapidly increasing in range. Bombs are getting more deadly. Aerial attack to terrorize non-combatants in well populated districts and to paralyze or destroy key industrial areas, has become established as a major element in the strategy of modern warfare. Each advance in the power and range of hostile air armadas brings the horror and death-dealing potentialities of war a step closer to home.

Part the Fire Service Will Play in War

Out of all this looms the grim realization of the vital part the fire service will be expected to take in future wars to safeguard the nation against the ravages of aerial attack. With what we have seen of the havoc wrought in Spain and China as a sample, we can look forward to a fire menace of startling proportions —a menace that must not find us unprepared. In the light of these possibilities, the time has come when the Fire Chiefs of America should begin to give some thought to this problem and the tremendously added responsibility that will be theirs if this country ever does get mixed up in another war.

National Isolation No Longer Exists

We would all like to think that this nation will be able to stand fast on its determination to keep out of war. But that's the way we felt in 1916, before we found ourselves enveloped in the world war. We would like to think that this nation is sufficiently isolated, in any event, to be safe from any possibility of hostile invasion. But that, in the light of man's rapid progress in conquest of the air, is becoming more and more subject to question. As the flying range of planes increases, our relatively safe distances from other countries decreases. When it is considered what extraordinary advances have been made in aviation in the last twenty years, or since the world war, it does not require a great stretch of the imagination to see the time when we will be well within the danger zone. Yesterday it was an astounding feat to fly across the ocean. Today it is getting to be every-day stuff.

Development in Airplane Size and Range

Recently three Soviet aviators flew from Moscow to Southern California, a non-stop flight of over 6,000 miles. Within a matter of months, America's Pan-American Airways and Great Britain's Imperial Airways expect to be ready, after a long series of test flights, to establish regular trans-Atlantic commercial flying service. While the latest figures available on military planes used throughout the world give 1,200 miles as the maximum cruising range of the present type of bombers fully loaded for action—this means a 600 mile radius—war-minded nations are not in the habit of giving out any information on their newer types, and heaven only knows what some of them have up their sleeves. In this connection, it is interesting to note that only two weeks ago news came from Washington to the effect that a heavily armored bombing plane with a cruising range of more than 8,000 miles is now being developed for the U. S. Navy. This plane, with a wing span of about 170 feet and

weighing between 50 and 60 tons, will be powered with four 1,500 h.p. engines. Three leading aircraft builders have been working for many months on the plans for this giant bomber, which, so far as is known, will be superior to anything of its kind in the world. Who knows, but what other countries have similar plans under way.

Prediction of Greater Development in Air Transportation

Not long ago, in reply to the old question, "How far, how fast, how high can man fly in an airplane?", one of Great Britain's outstanding aeronautical authorities, H. E. Wimperis, Director of Scientific Research for the British Air Ministry and President of the Royal Aeronautical Society, made the studied prediction that the present type of plane, using an internal combustion engine, can be developed to cover a distance of 12,400 miles without refueling, to attain a speed of 550 miles an hour, and to reach an altitude of 61,000 feet. At the same time Mr. Wimperis suggested that some totally new means of flight may some day be developed to surpass even those limits.

Wonders That Are To Come

To those of us with imaginative minds, it takes only one look back at the wonders produced during the past generation to envision what the future holds. Forty years ago the airplane, radio and other marvels of the age might easily have been considered a maniac's dream. Twenty-five years ago many Fire Chiefs were extremely skeptical about the future of automobile pumping engines.

Must Prepare for Future Emergencies

So, let us not delude ourselves into any belief that the world has come to a stopping point in the development of war implements and that the future will continue to find us in foolproof position against disastrous invasion. War may not come this year, next year or even within the next generation, but we owe it to those we serve and to those who take over our work where we leave off, to lay the ground now in preparation for what may come. Obviously, any plan that may be made to handle war emergencies can also be made to function effectively in other major catastrophies such as earthquakes and floods, and this in itself is reason enough to get going without further delay. Our normal fire-fighting experience has taught us all that it is safer to be prepared for the things that don't happen, than be unprepared for the things that do.

Great Fire Destruction Would Follow Air Attacks

If war strikes, large and small cities alike which include in their boundaries important military objectives, such as industrial plants engaged in the manufacture of munitions and other military supplies, will most likely be the first to be attacked from the air. Thus, very few communities other than those strictly residential in character can expect any immunity from incendiary and explosive bombs. Numerous fires occurring at the same time, disabled water supply and power plants, interruption of all means of communication, roads made impassable, and tottering building walls, are some of the things that may happen to greatly intensify the general fire hazard. Poison gas attacks in densely populated areas is another factor to reckon with, even though military experts seem to agree that this danger is more psychological than real, since it can readily be overcome by instructing the populace in the simple precautions necessary. But even here the fire service will likely have to play a part.

Hazard of the Incendiary Bomb

The type of incendiary bomb that has been most commonly used is the one that contains thermite encased in magnesium. Thermite, which is a mixture of aluminum and iron oxide, gives an extremely hot flame of around 5,000 degrees Fahrenheit. Unless it is mixed with other materials, thermite burns only a few seconds, but it is difficult to extinguish, because the iron oxide supplies the oxygen necessary for the burning of the aluminum. The magnesium casing which is ignited by the thermite cannot be extinguished with water or even foam. In fact, when applied, these tend to spread the fire. When the magnesium burns it flows off as a molten metal that can penetrate through wooden roofs and floors, and for that reason is a dangerous incendiary agent. While there are other types of incendiary bombs, not so commonly used, the great amount of research and experimental work now going on in this direction will probably bring others worse than any we have ever known. In air attack, large and small incendiary bombs are dropped. Of the two, the smaller is regarded as the more dangerous because a large number dropped at one time may cause fires to break out at many points at the same time.

Elaborate Foreign Fire Defenses

In the foreign nations, where the danger of hostilities is most acute, and where they lie so close to each other that they are all readily subject to imminent danger of mass air attack, elaborate war-time fire defense preparations have been made and are being carried through with all haste. One of the things they fear most, it seems, is the incendiary bomb and what will happen if a sudden rain of these bombs start a large number of fires simultaneously. Because of this hazard, the fire protection forces in most cases will not be called upon to do anything but straight fire duty, except to assist in general rescue work from dangerous or gas contaminated buildings.

An English Local Defense Plan

In England, the government, through its Air Raids Precaution Department, is moving to strengthen the fire defenses of the country, and in addition to coordinating all activity, is planning to assist local authorities by providing fire apparatus and hose without cost, under some general restrictions. A local defense plan suggested for the guidance of Fire Department heads calls, among other things, for the following:

- Augmentation of the heavy fire apparatus.
- Provision of lighter fire apparatus, such as trailer pumps, and vehicles for towing them.
- Organization of auxiliary fire stations for use in emergencies.
- Organization of a system of patrols by units equipped to handle incipient fires.
- Provision of additional supplies of hose that could be used to relay water supply if water mains are destroyed.
- Recruiting and training of reserve and auxiliary personnel to include full-time firemen during the emergency, part-time firemen, personnel for watching posts, etc. It is figured that 200,000 or more of these auxiliary men will be required throughout the country.

In France, the preparations are somewhat on the same order as in England.

An interesting feature, here, is in the method of utilizing the civilian populace. The occupants of each building or groups of buildings will be organized and trained in squads of three, equipped to put out small

fires and render any other assistance that may be needed.

Comprehensive Plan of Defense by Japanese

In Japan, the government has a comprehensive plan which provides that:

All communication lines will be put underground;
Type and color of city buildings will be controlled to insure the greatest possible invisibility from the air;
Industrial plants, where possible, will be moved out of urban areas;
Tall buildings, and official establishments, will be required to have reinforced bomb and bullet-proof roofs;
Fire fighting systems will be greatly expanded to cope with incendiary bomb fires;
Bomb and gas-proof cellars will be constructed in large cities, and special laboratories will conduct research work for protection against gases.

When Cities are Attacked from the Air
An aerial attack by Japanese planes on Lotien, in North China. Note three simultaneous fires burning from incendiary bombs.

Fire Defenses in Other Countries

In several of the foreign countries, the details concerned with the fire defense are still under discussion and have not yet been fully worked out. It seems to be the general opinion, for one thing, that auxiliary fire-fighting forces, instead of being made a part of the regular Fire Department, should be organized and operated as separate units, but under the general supervision and control of the regular Fire Department heads. It is considered important, too, that fire apparatus and men, instead of being concentrated in large fire stations, as is the custom in many European countries, should be spread over more smaller stations to be less vulnerable to attack and also as a precaution if streets become impassable because of bombing.

Some Working Plans for Major Disasters

At this stage of the game there is no need of going into a lot of detail here on plans of procedure in preparing to meet these major emergencies. It is the purpose at the moment merely to get some thinking started on this whole question in a way that will lead to the formulation of some broad working outline that a careful study over a period of time will shape into something definite and concrete for the guidance of Fire Chiefs throughout the country.

Close observation of the developments in foreign nations where the problem is in acute stages should give us many ideas that may be adaptable to our own needs. Chief Ralph J. Scott, Los Angeles, and Chief George Goff, Oklahoma City, are among those who already have excellent working plans for the mobilization of all local resources in the event that major disasters befall their communities. No doubt their experience in this direction can be utilized to great advantage in helping others. While it seems desirable at the outset that each community should work out its own problem in a way that best suits local conditions, consideration should be given to the possibility of coordinating on a mutual aid groundwork all of our fire-fighting resources, either on a national or some sectional basis. We might even go so far as to enlist the cooperation and support of the federal government, on the ground that our work in war-time, especially in view of the danger from air attack, will be of vital importance in connection with any general national defense measures that will have to be undertaken.

Time to Wake Up the People to Dangers of Conflagration

It is reasonable to say that a majority of our Fire Departments today are under-manned and inadequately equipped, even to meet normal emergency possibilities of any extent. Because conflagrations or other major catastrophies do not happen often, many communities have been lulled into a false sense of security that brings calamity when disaster suddenly strikes. Strange as it may seem, many cities have not yet undergone the relatively simple and essential expedient of conforming their hose and hydrant coupling threads to the national standard—a measure of infinite importance under any conditions. Somehow, it seems to be an old American custom to wait until the horse is stolen before locking the barn door, and many communities as a result have suffered irreparable harm from conflagrations that might have been averted. The time has come for Fire Chiefs to take the bull by the horns and jar their otherwise public-spirited citizens to their senses and inject into them a better appreciation of the facilities needed to properly protect their lives and property against the ravages of fire and other catastrophies in which the fire service will be expected to play a vital role.

So far as war or other emergency plans are concerned, the International Association of Fire Chiefs is in good position now to take the lead in promulgating any measures that may be necessary from the standpoint of the fire service. And it is hoped that no time will be lost in appointing a permanent committee or taking any other steps that may be deemed necessary to start the machinery in action and keep it moving. Let us put this organization in a position to show the world that we are fully alive to what's going on and that we propose to keep well ahead rather than behind the procession of events.

(Paper read before the Annual Convention of the International Association of Fire Chiefs at Oklahoma City.)

I. A. F. C. Moves Ahead

Oklahoma City Convention Largest Held in Past Eight Years — Remarkable Growth in Association Reported

A STAFF REPORT

ALTHOUGH each convention of the International Association of Fire Chiefs since 1933 has shown a marked increase in attendance, as well as exhibits, the Oklahoma City meeting, held on October 19 to 22, proved the most outstanding in the past eight years. The number of Chiefs attending this year's meeting totalled approximately 20% more than last year. The total number of active and associate members registered at the Convention was 465, while the guests totalled approximately 350, or a grand total of 815.

The exhibit feature, under the direction of Chief Ray Tiller, of Waterloo, Iowa, was outstanding. There were more than twice the number of exhibitors at Oklahoma City than at any Convention since 1933.

Membership figures reported show that the Association has increased 36% in membership in the past year. The actual number of new members totalled 664.

New Orieans was selected for next year's Convention, and judging from previous Conventions held in that city, the remarkable growth of the Association and its Conventions should be maintained.

All officers in line were advanced, Chief Daniel B. Tierney becoming President; Chief Roy B. Mottesheard, 1st Vice President; and Chief Ray Tiller, Waterloo, Iowa, Chairman of the Exhibit Committee of this year's Convention, was elected 2nd Vice President.

Ex-Chief James J. Mulcahey of Yonkers, N. Y., was reelected Recording Secretary-Treasurer and Jay W. Stevens, State Fire Marshal, of California, was renamed Executive Secretary.

The Convention Opens

The Convention was called to order on Tuesday, October 19, at 10:30 by President Bogan.

After opening ceremonies, including the address of welcome and response thereto, the memorial services were staged. These were held in the main theatre of the Civic Auditorium and proved to be the most impressive ever conducted by the Association. Deputy Chief L. Chenoweth of Oklahoma City was Chairman of the Memorial Services and Chief R. W. Granger of Tulsa, Oklahoma, Vice Chairman.

Total membership gain in past year, 664, or 36%.

Active membership at Convention 20% ahead of last year.

465 active and associate members registered at meeting.

Exhibits showed more than 100% increase over 1936.

New Orleans gets 1938 Convention.

Chief Daniel B. Tierney, Arlington, Mass., elected President; Chief Roy B. Mottesheard, Dearborn, Mich., 1st Vice-President; Chief Ray Tiller, Waterloo, Iowa, 2nd Vice-President; Ex-Chief J. J. Mulcahey, Yonkers, N. Y., Recording Secretary-Treasurer; J. W. Stevens, San Francisco, Cal., Executive Secretary.

The real business of the Convention was taken up at the Tuesday afternoon session. Reports of the various District Representatives showed a uniform growth in strength of the Association in all sections of the country.

Administration and Cooperation of Fire and Police Departments

Judge Clifford Davis, Commissioner of Safety of the City of Memphis, Tennessee, was the first speaker on the program. Judge Davis discussed cooperation of police and fire departments and quoted the old Roman maxim that "The safety of the people is the supreme law," and its application to the work of police and fire departments. He emphasized that the work of the police and fire departments was interlocking and cooperation was vital to success. "I believe and practice the simple, fundamental doctrine as a Commissioner under a political form of government, of recognizing that to do the fire department job well, the representative of the people must first select that Chief who has had the background of experience and loyalty and love and devotion for his work, and who, by his industry and his application to the job, has stepped on upward, and made the necessary progress to be installed as a chief officer of that department," said Judge Davis. He added, "The fire and police departments must fundamentally cooperate. They must train the men and train the personnel as never before. They must practice courtesy as they have never done before."

European Signalling Systems and Methods of Controlling Street Traffic

Leonard Spangenberg, Engineer, of the Babson's Statistical Organization, reviewed the findings of a trip he made to the leading cities of Europe to determine their practices with regard to fire alarm systems and street traffic control systems.

"It is very difficult for us to even imagine the scarcity of fire alarm boxes in Europe," said Mr. Spangenberg. "We think of New York City with its teeming seven millions as having almost 10,000 fire alarm boxes. We speed west to the Automobile Capital of the world with its million and one half streamlined population and its thirty-one hundred red sentinels for fire protection. We stop long enough in the Windy City and count 2,600 red boxes for its three and one-third million citizens. We dash south into sunny Cincinnati and find that 450,000 people could send in an alarm of fire from any one of 850 fire alarm boxes. Even little Louisville, with 300,000 southerners, has 600. Fly east and look down on Lenoir, which, by the way, is in North Carolina, and even in this town of only 7,000 dwellers they have 93 fire alarm boxes."

Mr. Spangenberg then pointed out the fire alarm box situation abroad. "City of London," he said, "has a population of some six million persons. To serve this vast army of London residents the city only has 1,723 fire alarm boxes. Paris, with its population of three million, has only 610 regular fire alarm boxes. It also has 714 private boxes in public buildings. Brussels, Belgium, has a population of roughly a million people. The city does not have any system of fire alarms. The telephone costs so little that about every home is equipped with one. Alarms are given over the telephone in most every case. They are also putting telephone booths on the corner of each block. However, in order to be connected with the Fire Department, you must pay for the call, the same as any other call. The fire alarm system of Berlin is the most modern of any of the European cities which I visited. Berlin with a population of five million has about 4,000 boxes. Roughly, only about 30% of the fire calls are by telephone.

"Rome, with its population of 700,000 does not have a fire alarm system. The telephone costs very little in Rome and

therefore most of the families have one. The telephone is used extensively for the calling of the fire department.

"The city has a very unique way of clearing the streets when the fire apparatus is coming. In the main headquarters building they have a large map on the wall showing all the different streets of the city, the location of large public buildings, etc. At each intersection on this map where there is a traffic light, there are three little lights in a row to represent the actual traffic light —one green, one red and the other amber. While I was watching the board, the various lights were changing from one color to another at exactly the same time as they were changing out on the street. This large map, with its many small lights, thus portrayed what streets in the city had green lights at that minute and just which ones had red lights.

"This is the way this system will work when finally completed (it is now being installed); if an alarm should be received from one of the thickly traveled streets, the operator in this room would press a button which would instantly change all the lights on the route to the fire from red or amber to green. It would also ring a bell in the traffic control box on each corner. This would, of course, let the police officer know officer could then change them back to their regular routine."

Some Notable Figures at the Convention

Left to Right: Chief Geo. M. Kellogg, Sioux City, Ia., President Emeritus of the Association; Chief and Comr. J. J. McElligott, New York; Chief M. J. Corrigan, Chicago; Chief Ray Tiller, Waterloo, Ia., 2nd Vice-President.

The New London, Texas, Schoolhouse Explosion

Dr. David J. Price, Principal Engineer in Charge of the Chemical Engineering, Division, Bureau of Chemistry and Soils, Department of Agriculture, Washington, D. C., reviewed the New London, Texas., schoolhouse explosion and described the possible causes thereof. It is now believed that the explosion was not caused by gas taken from return pipe lines to oil establishments as was first believed.

The heavy loss of life of this catastrophe was caused entirely by the explosion, there being no subsequent fire.

Dr. Price set forth rules for protection of school properties, particularly insofar as occupancy of the basement is concerned, to eliminate the possible loss of life in the future.

WEDNESDAY MORNING SESSION

The session on Wednesday morning opened with a paper prepared by A. C. Hutson, Assistant Chief Engineer of the National Board of Fire Underwriters, on "What Future for Fire Alarms Systems?" and read by Col. Clarence Goldsmith of the National Board.

The three fundamental principles in-

(*Continued on page* 606)

Three Presidents and the Convention Host

Left to right: Chief R. A. Bogan, retiring President; Chief Geo. B. Goff, Oklahoma City, convention host; Chief Daniel B. Tierney, newly elected President; Chief Roy E. Mottesheard, 1st Vice President.

Chiefs Who Attended the Annual Convention of the I. A. F. C. at Oklahoma City, Okla.

(Chiefs unless otherwise specified)

ALABAMA
S. T. Green, Gadsden
B. O. Hargrove, Birmingham
L. B. Hill, Bessemer
W. W. Stephen, Anniston
Donald White, Florence

ARKANSAS
M. J. Brun, Ft. Smith
J. W. Carmichael, Little Rock
E. K. Farbridge, Monticello
Chas. S. Hafer, Ex-Chief, Little Rock
Roy Nichols, N. Little Rock
W. S. Springer, Texarkana

CALIFORNIA
Chas. J. Brennan, San Francisco
W. P. Cooper, Richmond
C. P. Kerner, Jr., Rio Vista
Edw. Lamb, Ex-Chief, San Francisco
Wm. G. Lutkey, Oakland
Jay W. Stevens, State Fire Marshal, San Francisco
Vernon D. Van Sant, Dixon

COLORADO
E. A. Brumley, Greeley
Vern Campbell, Longmont
John F. Healy, Denver
Emil A. Johnson, Boulder
Fred A. Taylor, Colorado Springs
Luther P. Willis, Pueblo

CONNECTICUT
Thos. F. Burns, Bridgeport
Thos. F. Cavanaugh, Waterbury
W. J. Noble, New Britain

DELAWARE
Harry F. Hasson, Ind. Chief, Wilmington
Wm. J. Lutz, Wilmington

FLORIDA
H. R. Chase, Miami
Gideon Dean, Orlando
W. Q. Dowling, Jacksonville
Steve Edwards, Quincy
B. B. Hart, Daytona Beach
J. S. Stephenson, Miami Beach

GEORGIA
D. W. Brosnan, Albany
O. J. Parker, Atlanta
H. L. Taylor, Rome
Max Wiggins, East Point

ILLINOIS
M. J. Corrigan, Chicago
Earl E. Cratty, Galesburg
Frank M. Davis, Danville
G. M. Houren, Winnetka
Geo. Knol, Cicero
Albert Luedeke, Freeport
Frank C. McAuliffe, Chief Fire Patrol, Chicago
John O. Nygren, Joliet
William Platt, Decatur
E. J. Ryan, Aurora
August G. Schmidt, Rock Island
Geo. Simon, Quincy
W. A. Thrun, Batavia
R. E. Whalen, Elgin

INDIANA
Irvin E. Bauman, Michigan City
Thomas Clune, Gary
Wm. Freeh, South Bend
A. E. Homann, La Porte
Fred A. Kennedy, Indianapolis
Archie McCabe, Ex-Chief, Muncie
Harry E. Williams, Richmond
Clem Smith, State Fire Marshal, Indianapolis

IOWA
Bernard Meany, Ottumwa
R. P. Collatt, Burlington
J. C. Dobson, Keokuk
Wright Hedges, Atlanta
M. F. Gunderson, Oelwein
George M. Kellogg, Sioux City
R. A. Kelley, Davenport
E. P. Kohout, Cedar Rapids
L. R. Morris, Ames
Ray Tiller, Waterloo
Chas. L. Slade, Des Moines
C. A. Stephenson, Red Oak
W. T. Nelson, Cherokee

KANSAS
W. A. Buel, Parsons
Wm. J. Cawker, Topeka
Olander Lind, Kansas City
H. G. Lindgren, McPherson
H. H. McCall, Wichita
F. P. Moore, Newton
Donald J. Rayburn, El Dorado
Willis Rodgers, Ottawa
Glen West, Hutchinson

KENTUCKY
C. J. Henry, Lexington
E. A. McHugh, Louisville
H. R. McDonald, Chief Salvage Corp., Louisville

LOUISIANA
R. A. Bogan, Baton Rouge
Fred A. Baumgarten, Lake Charles
Rene Bernard, Thibodaux
John David, Minden
O. K. Davis, Ruston
A. O. Eastman, Jennings
John M. Evans, New Orleans
S. J. Flores, Shreveport
A. A. Hanson, Westwego
J. A. Hebert, Sr., Plaquemine
C. Y. Lyons, Arcadia
J. C. McEachern, Haynesville
J. W. Miles, Crowley
R. Neff, Alexandria
Felix Perres, Rayne
F. J. Roddy, Monroe
E. G. Smith, Bogalusa
Elward Wright, Houma

MAINE
Oliver T. Sanborn, Portland
J. W. Randlette, Richmond

MARYLAND
Iesse A. Fisher, Annapolis

MASSACHUSETTS
Michael J. Shea, Fitchburg
Arthur E. Soper, Mansfield
Robert M. Tappin, Gardner
Daniel B. Tierney, Arlington
James E. Moloy, Woburn
John W. O'Hearn, Watertown
Geo. L. Johnson, Waltham

A Good Time Was Had by All at the "Gamewell Rendezvous"

In a spacious room just off the lobby of the headquarters hotel, the Gamewell Company provided a popular gathering place which proved to be one of the highlights of the convention. Open house was kept at all times, choice refreshments were served and the folks made merry. Seated in the foreground (wearing chef's hat) is V. C. Stanley, President and Genl. Mgr. of the Gamewell Co., and to his left is Chief Robert J. Bogan of Baton Rouge, La., retiring I. A. F. C. President.

Stephen C. Garrety, State Fire Marshal, Lowell
Herman E. Gutheim, Cambridge
Patrick J. Hurley, Holyoke
Wm. H. Hill, Belmont
Frank F. Dickinson, Brockton
George F. Cobb, (Hon.), Boston
Selden R. Allen, Brookline
Chas L. McCarthy, Worcester

MICHIGAN

C. F. Baker, Highland Park
Frank M. Bender, Jr., Saginaw
Gustav Anselm, Wyandotte
Ledger Chauvin, Grosse Pointe
Hugo R. Delfs, Lansing
John M. Griffin, Hamtramck
A. M. Jaeger, Ecorse
W. F. Israel, Detroit
R. E. Mottesheard, Dearborn
Don D. Post, Ferndale
Harry L. Ridout, Muskegon Hts.
F. F. Trombley, Sault Ste Marie
Chris Smith, Muskegon
J. Frank Van Atta, Kalamazoo

MINNESOTA

Louis Turk, Chisholm
Earl A. Traeger, Minneapolis
N. F. Quist, Virginia
J. H. MacWhirter, Eveleth
John A. Fisher, Duluth
Napoleon Ayotte, Hibbing

MISSISSIPPI

W. F. C. Partin, Meridian
L. F. McDonald, Jackson
G. T. Haskins, Greenwood

MISSOURI

Leo J. Urbanski, St. Joseph
T. M. Walden, Columbia
Jas. T. O'Donnell, Chief Salvage Corp., St. Louis
John J. O'Boyle, St. Louis
Guss W. Jolliff, West Plains
W. H. Gardner, Chief Fire Patrol, Kansas City
T. J. Hardwick, Kansas City
Tom Enright, Joplin

NEBRASKA

R. J. Van Fleet, Hastings
A. W. Olsen, Omaha
F. W. Donnelly, Lincoln
L. J. Wilcox, Nebraska City

NEW HAMPSHIRE

F. M. Sargent, Sunapee
Chas. H. French, Manchester
W. C. Happny, Concord

NEW JERSEY

Otto Wagner, M.D., (Hon.), Elizabeth
K. V. Ridley, Ex-Chief, Teaneck
Robt. A. Reid, Bellville
Oliver B. Presley, Long Branch
Wm. F. O'Neill, Weehawken
Geo. L. Mitchell, Ex-Chief, East Orange
Thos. J. Murray, Summit
Chas. A. McGinley, East Orange
John C. Loughran, South Orange
Geo. P. Lasher, Edgewater, N. J.
M. T. Kennedy, W. Orange
James T. Keegan, Supt. Salvage Corp., Newark
William Kenah, Elizabeth
W. S. Taggart, Asbury Park
Chas. Friedel, Jr., Union City
J. David Hayes, Millburn
Jas. G. Hogan, Bayonne
Gus L. Day, Mendham
Fred C. Decker, Westfield
John J. Cullinan, Morristown
S. B. Conver, Ocean City
Fred W. Cordes, Maplewood
Andrew T. Callahan, Harrison
Albert Chamberlain, Hillside
Myron Barbour, Long Branch
Ernest G. Beckert, West New York
Jacob A. Bloom, Red Bank

NEW MEXICO

R. V. Miller, Clovis
Rue Chrisman, Roswell

NEW YORK

J. N. Sullivan, Utica
Thomas C. Shannon, Supt. Fire Patrol, New York
Fred Shepperd, (Hon.), New York
Francis E. O'Boyle, Middletown
G. E. Morley, (Hon.), New York
Jas. J. Mulcahey, Ex-Chief, Yonkers
John J. McElligott, New York
John Gibson, Mt. Vernon
Edw. W. Gieselman, Syracuse
I. H. Case, (Hon.), New York
Wm. R. Castimore, Buffalo
Philip Baker, Ex-Chief, Pt. Chester
Geo. W. Brown, Newburgh
John J. Brennan, Pelham Manor

NORTH CAROLINA

Frank D. Shaw, Greensboro
D. E. Shuford, Hickory
W. H. Palmer, Charlotte
John L. Miller, Concord
W. E. Holland, Raleigh
Sherwood Brockwell, State Fire Marshal, Raleigh

NORTH DAKOTA

James Black, Grand Forks

OHIO

E. P. Welch, Columbus
Grover L. Frock, Springfield
M. M. Hand, Shaker Heights

OKLAHOMA

Ed Vogel, Ind. Chief, Oklahoma City
W. W. Wicker, Shawnee
W. C. Moore, Marlow
E. O. Welch, Sulphur
Ralph Wright, Eufaula
Hardin White, Altus
W. T. Warren, Alva
A. H. Seay, Miami
Chas. Slemp, Ex-Chief, Oklahoma City
Hiram D. Scott, Bartlesville
Chas. Safford, Picher
Gene Sands, Mangum
Wm. C. Theimer, Oklahoma City
Earl Harvey, Hobart
James A. Ballard, Walters
John Bausman, Nowata
John Bay, Anadarko
John Bean, Tahlequah
J. P. Brooks, Okmulgee
Frank Beam, Bristow
L. N. Boughton, Watonga
R. A. McBrien, Frederick
W. M. Allison, Hominy
W. M. Collier, Sapulpa
Robt. J. Cotton, Holdenville
Frank Dews, Chickasha
R. J. Haymes, Claremore
L. M. Hersman, Wagoner
E. C. Haley, Ada
J. L. Husband, Wetumka
Geo. B. Goff, Oklahoma City
R. W. Granger, Tulsa
Clyde E. Garrison, Hugo
W. N. Girdner, Clinton
Alvin Gelbhar, Cushing
Chas. S. Fuqua, Ind. Chief, Cushing
Earl Ferguson, Drumright
Boise Fulkerson, Norman
Henry Jackson, Ex-Chief, Guthrie
O. G. McCain, El Reno
Clark McKinney, Yukon
Oscar Merrell, Tonkawa
John H. Moore, Ardmore
Ralph O. May, Weatherford
L. L. Moore, Durant
Ed Nelson, Guthrie
Leon Parker, Sand Springs
R. M. Pickens, Muskogee
J. Ray Pence, Stillwater
Geo. R. Pollard, Lawton
F. R. Reilly, Woodward
E. F. Rickert, Elk City

PENNSYLVANIA

M. E. Clark, Williamsport
John J. Kelly, Scranton
Edw. J. Mellin, Jermyn
H. T. Plante, Ellwood City
Edw. G. Shoemaker, Lancaster
Chas. Smalenberger, Meadville
C. E. Wood, Ex-Chief, Chester
Chas. E. Clark, Ex-Chief, Wayne

RHODE ISLAND

Thos. H. Cotter, Providence
Frank J. Callahan, Central Falls
A. J. Cote, Woonsocket
Joseph S. Lawton, Newport

SOUTH CAROLINA

F. E. Donnald, Greenville
G. H. Fischer, Orangeburg
A. S. Mauldin, Anderson
H. B. Wells, Newbury

SOUTH DAKOTA

Wm. A. Sloan, Sioux Falls

TENNESSEE

Robt. Jones, Chattanooga
C. M. Johnson, Knoxville
Irby Klinck, Memphis
J. Roy Pyle, Kingsport

TEXAS

S. E. Hansen, Dallas
C. E. Greiesser, Bryan
S. Ferguson, Ft. Worth
J. H. Davidson, Houston
Jodie Moss, Paris
L. A. Mackey, Longview
A. L. Vrana, Flatonia
Ed White, San Angelo
G. F. Williams, College Station
I. W. Speckels, Schulenburg
John T. Sullivan, El Paso
A. Solmky, Seguin
Walter A. Staats, New Braunfels
W. E. Twitty, Lubbock
J. Ray Roe, Abilene
D. P. Rachel, Port Arthur
S. D. O'Conor, Beaumont
Ben R. White, Pampa
John D. Huntley, Vernon
A. W. Hennessee, Eastland
M. Eversole, Honey Grove
Parke D. Evers, McGregor
A. B. Cribbs, Arlington
Geo. B. Cooper, Amarillo
Eugene Cook, Denton
F. R. Aten, Gladewater
M. P. Burns, Tyler
J. E. Benjamin, Texarkana
H. C. Brown, Talco
E. P. Anderson, Lancaster

UTAH

W. S. Knight, Salt Lake City

VERMONT

Carl D. Stockwell, Burlington

VIRGINIA

E. H. Rouse, Orange
Roscoe A. Foster, Navy Yards, Portsmouth
James M. Duncan, Jr., Alexandria
R. S. Baughan, Norfolk
H. L. McClanan, Virginia Beach

WEST VIRGINIA

Ralph F. Doolittle, Fairmont

WISCONSIN

Fred J. Moeller, Kenosha
Geo. P. McGillan, Appleton
F. C. McGlachlin, La Crosse
Peter Steinkellner, Milwaukee
J. T. Sweeney, Superior

WASHINGTON

W. S. Payne, Spokane

CANADA

George Sinclair, Toronto

SNAPPED HERE AND THERE AT THE OKLAHOMA CITY CONVENTION

Ye Convention Hosts—Center, Chief Geo. Goff of Oklahoma City who did a swell job of handling guests; left, Chief and Mrs. John M. Evans of New Orleans, next year's hosts; right, Chief and Com'r John J. McElligott of New York, with Mrs. McElligott (right) and Mrs. Harry M. Archer, wife of Dr. Archer, who expect to entertain the 1939 convention.

Left, part of the strong Illinois delegation; center, Chief Daniel Tierney of Arlington, Mass., newly elected President, got dressed for the occasion; right, a few of the large delegation of New Jersey regulars.

Some of the well-known equipment makers—left to right, Joe C. Ringers, Sales Mgr. Fabric Fire Hose Co., with Bob Anderson, Vice-Pres., Buckeye Iron & Brass Wks.; V. C. Stanley, Pres., and E. J. McCarthy, Gen'l Sales Mgr. the Gamewell Co.; Clarence Meek, N. Y. Mgr. and Chas. Fox, Pres., Ahrens-Fox Fire Engine Co.; E. E. Hansen, Sales Mgr. and E. H. Hansen, Vice-Pres. Elkhart Brass Mfg. Co.

Left to right—Chief Chas. Brennan of San Francisco, Chief Thos. Burns of Bridgeport, Conn., and H. A. Scharfenburg of Mack Trucks, N. Y.; Chiefs L. F. McDonald of Jackson, Miss., and G. T. Haskins, Greenwood, Miss.; Chief M. F. Gunderson, Oelwein, Ia., and J. W. Strohm, Des Moines, Mgr., Eureka Fire Hose; Chief D. W. Brosnan, Albany, Ga., with Chief H. B. Wells of Newberry, S. C., and H. B. Wells, Jr.

Lining up for refreshments at the Fair Grounds, left, Chief J. Ray Roe, Abilene, Tex., waiting for a handout; right, Chief C. J. Hardwick of Kansas City, Mo., got his.

Associate Members at the Annual Convention of the I. A. F. C.

CALIFORNIA
M. J. Collins, Capt., Rio Vista
R. J. Graves, American Rubber Mfg. Co., Oakland

COLORADO
L. L. Bell, Western Fire Dept. Supply Co., Denver

CONNECTICUT
J. H. Ringers, Sales Mgr., Fabric Fire Hose Co., Sandy Hook

DELAWARE
Frank Sweeney, Capt., Wilmington

DISTRICT OF COLUMBIA
James R. Coxen, Agent, Federal Bd. for Vocational Education, Washington
David J. Price, U. S. Dept. of Agriculture, Washington
Geo. J. Richardson, Secty.-Treas., International Assn. of Fire Fighters, Washington
W. W. Withers, American-LaFrance Foamite Ind., Washington

GEORGIA
George H. Coates, Fulton Bag & Cotton Mills, Atlanta
W. Q. Dowling, Jr., Seagrave Corp., Atlanta
D. A. Kellam, Kellam Mfg. Co., Atlanta
Roy S. Timmerman, Atlanta
Arthur H. Wilson, Branch Mgr., The Seagrave Corp., Atlanta

ILLINOIS
J. J. Bailey, Electric Controller Corp., Chicago
James O. Binford, District Manager, American-LaFrance Foamite Ind., Chicago
B. E. Cover, Sr., Cover Dual Call Systems, Chicago
H. W. Devine, Bi-Lateral Fire Hose Co., Chicago
James A. Flynn, Potter Mfg. Co., Chicago
James M. Gleason, Automotive Service Engineer, Chicago
Clarence Goldsmith, National Board of Fire Underwriters, Chicago
Louis A. Lehr, The Seagrave Corp., Chicago
Joseph F. Moeller, Mars Light Co., Chicago
John W. Raleigh, Fire Commissioner, Cicero
H. K. Rogers, Chicago
J. B. Rustic, Supt., American District Telegraph Co., Chicago
H. E. Smith, Fire Inspector, National Inspection Co., Chicago
Frank F. Stover, Gamewell Co., Chicago
C. W. Straub, Bi-Lateral Fire Hose Co., Chicago
A. J. Valind, Sales Mgr., Midwestern Mfg. Co., Mackinaw
E. C. Watson, American-LaFrance Foamite Ind., Chicago

INDIANA
E. E. Hansen, Sales Mgr., Elkhart Brass Mfg. Co., Elkhart
E. H. Hansen, Vice Pres., Elkhart Brass Mfg. Co., Elkhart

IOWA
Charles L. Dollerhide, Chairman, Fire Commission, Davenport
Claude P. Hooker, Peter Pirsch & Sons Co., Marshalltown
J. V. Pyle, State Fire Marshal, Des Moines
John W. Strohm, Des Moines

KANSAS
J. J. DeAsmond, Arkansas
C. C. Johnson, Asst. Chief, Emporia
T. A. Withers, Kansas City

LOUISIANA
Walter K. Grant, Louisiana Rating & Fire Prevention Bureau, New Orleans
Fernand Privat, Rayne
D. M. Slaughter, National Board of Fire Underwriters, New Orleans
Frank A. Von der Haar, State Fire Marshal, New Orleans

MASSACHUSETTS
Percy Bugbee, National Fire Protection Assn., Boston
Edward J. McCarthy, Gen. Sales Mgr., The Gamewell Co., Newton
Terry A. Newhall, Lynn
N. D. Sherwood, Rockwood Sprinkler Co., Worcester
V. C. Stanley, Pres. & Gen. Mgr., Gamewell Co., Newton
Hubert W. Tracy, American Fire Equipment Co., Boston

MICHIGAN
B. D. Barton, American Marsh Pumps, Inc., Battle Creek
L. Long, Supt. of Fire Alarm Signals, Ecorse
Moore Meigs, Moore Meigs Co., Detroit
Paxton Mendelssohn, Deputy Fire Marshal, Detroit
Edward C. Rumsey, Chief of Apparatus, Detroit

MINNESOTA
John A. Crane, Capt., Minneapolis
Harold F. Lundberg, Peter Pirsch & Sons Co., Minneapolis

MISSOURI
F. C. Baird, Gustin Bacon Mfg. Co., Kansas City
Edward S. Dolan, Pres., St. Louis Sponge Co., St. Louis
Edgar C. Faris, The Seagrave Corp., Kansas City
Ray Funderberger, Eureka Fire Hose Division, U. S. Rubber Co., Kansas City
Ernest J. Goodell, Opie Sponge Co., Kansas City
R. F. Hansing, Heart Fire Equipment Co., Kansas City
T. L. McGuire, Kansas City
John T. Opie, Opie Sponge Co., Kansas City
Glenn T. Scott, American-LaFrance Foamite Ind., Kansas City

NEW JERSEY
O. F. Beutell, American-LaFrance Foamite Ind., Red Bank
Ernest N. Day, New Jersey Fire Equipment Co., Dunellen
Thos. J. Fanarjian, Lehigh Valley Railroad, Newark
John B. Keenan, Fire Commr., Newark
J. P. Maloney, Pyrene Mfg. Co., Newark
M. C. Murphy, Kearny
P. Tommie, American Fire Hose Co., Passaic

NEW YORK
Dr. Harry M. Archer, Hon. Deputy Chief & Medical Officer, New York
George W. Booth, Chief Engineer, National Board Fire Underwriters, New York
G. E. Bradbrook, Vice Pres., C. G. Braxmar Co., New York
H. G. Cavanagh, American District Telegraph Co., New York
A. G. Crockett, Mack Trucks, Inc., New York
Joseph H. Green, General Mgr., Eureka Fire Hose Div., U. S. Rubber Co., New York
C. E. Meek, Ahrens-Fox Fire Engine Co., New York
W. Moeller, Atlas Fire Equipment Co., New York
George Palmer, New York
Clarence D. Stewart, Sales Representative, American-LaFrance Foamite Ind., Pt. Washington
Arthur G. Sullivan, American-LaFrance Foamite Ind., Elmira
Nelson Thompson, Homelite Corp., Port Chester
Frank A. Toomey, Lieut., New York
J. O. Veit, Secty., C. G. Braxmar Co., New York
Hubert Walker, American-LaFrance Foamite Ind., Elmira

OHIO
R. C. Anderson, Vice Pres., Buckeye Iron & Brass Works, Dayton
Charles H. Fox, Pres., Ahrens-Fox Fire Engine Co., Cincinnati
Lee Hardy, Buckeye Iron & Brass Works, Dayton
Edgar M. Heltman, Editor, Fire Protection, Cincinnati
John C. Schellin, Akron Brass Mfg. Co., Inc., Wooster
Wm. Schleinitz, Dayton Fire Equipment Co., Dayton
Lester Stevenson, The Seagrave Corp., Columbus

OKLAHOMA
H. J. Clark, Chief Engineer, Oklahoma Inspection Bureau, Oklahoma City
Martin Selbhar, Asst. Chief, Cushing
Wm. Glenn Bennett, Mgr., Mack Truck Co., Oklahoma City
I. H. Blumenthal, Davis Bros. Uniform Co., Oklahoma City
T. W. Herrin, American Fire Apparatus Co., Bristow
H. W. Richards, Mine Safety Appliances Co., Tulsa
Elmer Vrooman, National Board of Fire Underwriters, Oklahoma City
Dick Walsh, Eureka Fire Hose Div., U. S. Rubber Co., Oklahoma City

PENNSYLVANIA
John T. Coughlin, Asst. Chief, Greensburg
Art Espey, Mine Safety Appliances Co., Pittsburgh, Pa.
T. A. O'Leary, Acme Protection Equipment Co., Pittsburgh, Pa.
George L. Seth, Mine Safety Appliances Co., Pittsburgh

TENNESSEE
Bob Simmons, American-LaFrance Foamite Ind., Paris

TEXAS
Cone Bass, Mack Trucks, Inc., Dallas
H. R. Brayton, Director, Texas Firemen's Training School, College Station
A. B. Busbey, Sales Representative, American-LaFrance Foamite Ind., Dallas
Theo. H. Fields, E. D. Bullard Co., Houston
F. Granbury, Asst. Chief., Mineral Wells
R. J. Habermann, American District Telegraph Co., Dallas
Faybert Holmes, Asst. Chief, Mineral Well
Frank Holton, Fire Commissioner, Houston
A. C. Hopper, Fabric Fire Hose Co., Dallas
C. E. Jenkins, Bryan
B. B. Jones, Asst. Supt., American District Telegraph Co., Dallas
R. W. Joyner, Manager, Eureka Fire Hose Division, U. S. Rubber Co., Dallas
Morris Lee, Homelite Corp., Dallas
Charles F. Maulen, Gamewell Co., Dallas
H. L. Phillips, Mine Safety Appliances Co., Dallas
C. R. Raynes, The Seagrave Corp., Dallas
W. D. Simpson, American District Telegraph Co., Dallas
Henry Smith, Asst. Chief, Wichita Falls

VIRGINIA
J. F. Raffo, Chief, Fire Prevention, Richmond
E. J. Venopal, Director of Sales, Charlottesville Woolen Mills, Charlottesville

WISCONSIN
Lester H. Brenner, Peter Pirsch & Sons Co., Kenosha
H. P. Lundskow, Peter Pirsch & Sons Co., Kenosha
Peter Pirsch, Peter Pirsch & Sons Co., Kenosha

CANADA
George E. Thomas, American La France Foamite Ind., Toronto, Ontario

Exhibits of the Gamewell Company and Rockwood Sprinkler Company at the Convention

Some Notable "Firsts" in the Fire Service

A Chronicle of the Important Developments in Equipment and Personnel of Fire Departments Over a Period of Twenty Centuries, Continued from Last Issue

IN March, 1858, the Boston City Council adopted a resolution which read:

"Resolved that it is expedient for the city to purchase a steam fire engine as soon as one can be obtained which will be satisfactory to the City Council and chief engineer of the Fire Department."

Several were then in process of construction and to determine which of them, and others that may be constructed, was the best to purchase, the City Council authorized a special committee to conduct a demonstration of them for prizes of $500, $300, $200 and $100, of which $300 was paid by the city, the remainder by insurance companies. The demonstration was held on the Common, August 31, 1858, with four contesting engines.

Volunteers in Action at Crystal Palace Fire, New York City

The contest was decided on points: 1st, simplicity of construction; 2nd, ability to keep in working order the longest time; 3rd, weight compared with effective power; 4th, time generating 60 lbs. of steam from cold water; 5th, quantity of water passed; 6th, durability; 7th, horizontal and perpendicular distance played; 8th, filling 2,500 gallon tank; 9th, best workmanship; 10th, price.

The first prize was awarded to the engine of the Philadelphia Hose Co. No. 1, of Philadelphia, made for that company by Reanie & Neafie of that city in 1857. It weighed 8,055 pounds and excelled in simplicity of construction, best mounted and horizontal stream 163 feet, and was second in weight. This engine was in service in Philadelphia for many years, was then used by the Underwriters Fire Patrol to pump out cellars after fires, is now kept by the Patrol as a valuable relic. It is now the oldest steam fire engine in this country, if not in the world. It was in Boston again, and worked at the same place on the Common in December, 1883, to demonstrate in a suit against Boston for damages by the Knibbs relief valve owners on the grounds that it contained a valve similar to the Knibbs valve placed in it when made. It helped materially to win the case for Boston. The Knibbs valve came in 1860.

The second prize went to an engine invented and made by W. S. Bean, at Lawrence, Mass., made for this contest. It weighed 7,870 pounds. It excelled in weight, raising steam and smallest boiler. This was the first of the famous Amoskeag steam fire engines made at Manchester, N. H. It was one of the two first steam fire engines purchased by Boston, where it went into service January 1, 1859. It was retired for a more modern engine in 1862 and used for pumping purposes for an iron concern for some years.

The third prize went to an engine made in Boston which weighed 9,866 pounds, which excelled in perpendicular playing, 125 feet. Fourth, to New Era of Boston; weighed 9,915 pounds, excelled in filling tank. The third prize winner after the contest was converted into a pile driver, and the other Boston engine, demolished.

Engines made by Latta of Cincinnati, Pool & Hart of Baltimore and Silsby of Seneca Falls, N. Y., who made many afterwards were not completed in time. Another made in Boston, the Johnson engine, was prevented from entering by an accident.

For this contest extra double riveted leather hose was made which did not burst when under pressure, a rare occurrence for leather hose, for which its maker was awarded a special prize of $100.

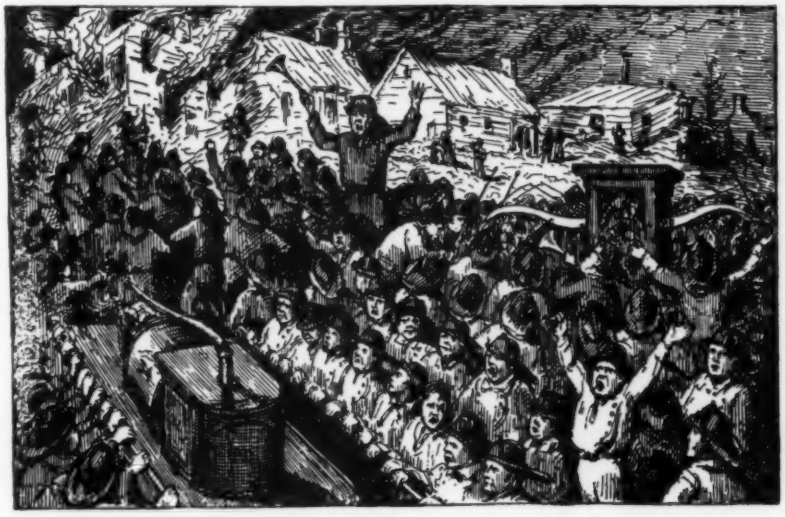
Adoption of Steam Engines Hastened by Contest

The Eclipse rotary engine made by Selby at Seneca Falls was given a special trial October 6, with excellent results, and was one of the two first steam engines purchased by Boston in 1859.

This demonstration helped materially to perfect steam fire engines, to decrease their weight, and to make them more suitable for regular fire service. It also greatly hastened their adoption in general use which came at an opportune time as so many hand engine firemen were in the Civil War.

The first of the successful self propelling steam fire engines, constructed in 1867, was invented by N. S. Bean, who built the first Amoskeag engine for the Boston, 1858, demonstration. It was used for exhibition purposes only until 1872. On November 9, that year, in anticipation of a call for it from Boston be-

cause of an epidemic of sickness among the fire and other horses of that city and elsewhere, it was taken from storage and put in serviceable condition. The call for it from Boston came the next morning, not to replace sick horses, but for service at the great conflgration there, where it was in continuous service for a week. After the fire it was purchased by the city and put in service in a suburban section. It frightened so many horses enroute to and from fires that it was changed to a horse drawn engine.



"Up to the Bend"—Old No. 14 "Washed" by No. 36 in a Fire at "Mackerelville" in New York City

New York Has First Self-Propeller

New York was the first city to have a self propeller, in October, 1872. In 1874 it procured four more. In all, 24 were in service in Detroit, Fond du Lac, Wis., Hartford, Conn., Brooklyn, N. Y., Chicago, Milwaukee, New Orleans, Portland, Me., Newark, N. J., and Vancouver, B. C., which was the last city to procure one, in 1908. The most famous of them was "Jumbo" of Hartford, Conn., which weighed 8½ tons and passed 1,300 gallons of water per minute, the largest steam fire engine in service ever made.

No one man ever did more for the fire service than Miles Greenwood. He not only brought successful steam fire engines into existence, but he made a success of them in service. When the first one went into service at Cincinnati, January 1, 1853, he became Chief of the Fire Department, to make that one and others that followed it a success. He placed his foundry business in charge of a manager, paying him a salary of $1,500 per annum. His salary as Chief was $1,000, he furnishing bonds of $2,000 therefor. He gave his salary the first year as Chief to the Mechanics Institute. The city made no appropriations for the maintenance of the new department in first three months, Chief Greenwood loaning it $15,000 therefor. He anticipated trouble. His life had been threatened several times and once he had been surrounded by a mob and threatened with vengeance. He encountered much opposition and difficulties. A less courageous man would have failed. For their safety he removed his family to a suburban town and was seldom with them. His management was successful. He held the position until April, 1855, when he retired. The City Council and members of the Fire Department adopted resolutions eulogizing his management and success, which was much appreciated by the city. He died in 1885 at the age of 78 years.

The Latta concern, which invented and constructed the first successful steam engine, has under different names been in continuous existence to the present time and is now the Ahrens-Fox Fire Engine Company, the oldest concern in this country manufacturing fire apparatus.

Three Important Inventions Revolutionized Fire Service

Three times the fire service has been revolutionized: first by suction engines, which came in 1822; second by steam fire engines, which came in 1852; and last by motor apparatus, which came in 1903. The last the most complete of them all.

When steam fire engines came, there was a demand for discarded hand engines in small towns. There was no important demand for discarded steam fire engines for fire service. Most of the many disposed of went for old metal at junk prices. Motor apparatus, which is suitable for cities, towns and communities of all sizes has superseded hand as well as steam fire engines.

Volunteers Fighting a Fire in Elm Street, New York City

(To be continued)

PROMOTIONAL STUDY COURSE

Herein is presented a series of definitions, questions and answers designed to aid fire department officers in preparing themselves for promotional examinations. In this department, which appears monthly, will be included questions typical of examinations held throughout the country.

Definitions

Calcium Carbide: A chemical combination of lime and coke, which, when wetted, gives off acetylene gas.

Cannel Coal: A bituminous variety of coal, formerly used in steam fire engines; used widely in open-hearth grates. Ignites very readily.

Carbon: A chemical element which is distributed in nature in free condition, in organic substances. It appears in various forms, the most common being that of charcoal.

Carbona: Carbon tetrachloride and gasoline mixed. Non-inflammable.

Questions

(To be answered in next issue)

1. You respond, on a still alarm with an engine and a truck company, to a fire in a five story building occupied by a printing plant. The fire appears to be on the fourth floor and there is considerable smoke throughout the building. The building is equipped with an automatic sprinkler system, standpipes and hose. Explain how you would extinguish this fire with the apparatus on hand.
2. How many men are permitted, without hose, on a 50-foot extension ladder and on an 85-foot aerial ladder.
3. How should a shut-off nozzle be shut off?

False and True Questions

(Is each question false or true? Answers in next issue)

4. T F—Electric irons without thermostat control are an acute fire hazard.
5. T F—Loyalty to chief officers and other authority is not essential to efficient fire fighting.
6. T F—If a building is sprinklered it should not be equipped with soda-acid extinguishers or water pails.
7. T F—Each member is required to obey and respect all officers whether they are assigned to his battalion or not.
8. T F—Building a flue from the ground reduces the fire hazard.
9. T F—Water damage alone is responsible for losses at fires.
10. T F—High pressure steam pipes should not be in contact with woodwork.
11. T F—Fireboats can serve as direct auxiliaries to the inland fire-fighting forces.
12. T F—Creation of 1 lb. vacuum in the suction causes the water to rise 2.304 feet.
13. T F—By "concentration" is sometimes meant a proper mixture of dust and air for explosion.
14. T F—Current for the operation of the fire alarm system is usually supplied from motor generators and secondary storage batteries located in fire alarm headquarters.
15. T F—Hot air heating for dwelling houses invariably involves an extremely small fire hazard.
16. T F—Members of the department are required, if possible, to obey orders from their superiors, even though the orders may appear unjust or improper.
17. T F—The number of the box is transmitted over the circuit to the fire alarm headquarters switchboards by means of the character wheel in the box.
18. T F—The Chief Engineer of the department is responsible for the extinguishment of all fires in the city with the least possible damage from water.
19. T F—Atmospheric pressure at sea level varies somewhat from time to time and from place to place.
20. T F—Some ships are provided with pipes which act as an aid in the detection of fire.
21. T F—Dusts from the following may cause dust explosions: leather, resins, sulphur, coal, flour.
22. T F—One of the greatest sources of trouble in connection with fires in passenger quarters of boats is the difficulty encountered in reaching them.

Completion Statements

23. If it is necessary to sink a burning ship, it should be let down on a ..... bottom if possible.
24. A ..... ladder should be used for boarding a steamship alongside a fireboat.
25. One design of Bresnan distributor has a total nozzle area equal approximately to that of a ..... nozzle.
26. The range of stream from a Bresnan distributor for a given pressure is ..... than that of a 1½-inch nozzle at the same pressure.

Answers to Questions in Previous Issue

1. (a) Dangers in fighting a well advanced fire in a power plant include: high voltage electrical apparatus and wiring, in connection with which the use of water streams may prove hazardous to the men of the department; oil cooled transformers and oil switches taking fire; fumes from burning insulation; collapse of structural steel work as well as heavy masonry exposed to hot fire. Steel work as well as masonry work in power stations is rarely protected against fire, and a sudden hot blast may cause warping of steel work and collapse of walls.

The precautions to observe in connection with such a fire are: use no salt water streams; use no chemical streams, nor foam extinguisher streams; if fresh water streams must be employed, operate only from a distance, for when such streams are used at close range, there is a possibility of men receiving injury through electric shock; cut off current supply of building and the electrical machinery therein, if possible, by use of service or other available switches. Ventilate building thoroughly to prevent accumulation of fumes from burning insulation and other materials found around electrical machinery; be on the alert for collapse of steel work and walls; finally do no unnecessary damage by careless use of water streams.

(b) Dangers incidental to fighting a fire in a drug store include: presence of dangerous chemicals which throw off poisonous fumes, or which may be explosive when brought in contact with flame; presence of inflammable volatiles, such as carbon disulphide, ether, alcohol, benzine, etc.; presence of acids which throw off dangerous fumes and which may cause injury to men coming in contact with either the fumes or the acids.

Precautions to take in operating at a drug store fire include, first, thorough ventilation of the establishment; second, careful use of streams; third, keeping means of egress clear, so that, in the event of necessity of quick retreat, no time will be lost.

In some of the large types of drug establishments such materials as the following may be found in considerable quantities: nitrates, chlorates, pyroxide of sodium, metallic sodium or potassium, picric acid, phosphorous, collodion, amylacetate, acetone, nitro benzol, anodyne, etc. All of these materials are dangerous to handle when involved with fire, and some of them intensify the fire tremendously.

2. There are three stages of smoke asphyxia. In the first stage, the victim is conscious. In the second stage, the victim is unconscious, but still breathing. In the third stage, the victim is unconscious and is not breathing. As the question does not state in which stage the victim is found, the third, which is the most serious, will be considered. Every second counts. Administer artificial respiration and use inhalator. If not available, then apply artificial respiration alone. Patient should be covered to the waist with a blanket. Place a blanket for him to lie upon. Order a stretcher nearby so that as soon as the respiration has been established, the patient may be removed to the nearest hospital. Do not allow patient to be placed in an ambulance or to be taken to a hospital until respiration has been re-established by artificial means, and has become deep and regular.

Before administering artificial respiration, the patient should be moved quickly to a point away from the fire so that he will not suffer from additional smoke.

(b) If the person is in contact with a charged wire, try at once to have the current shut off. If it is not possible to have the current shut off, great care must be used in moving the victim from the wire. It is dangerous to try to pull the victim from the wire by his clothing, as the cloth may be wet, and the person attempting the rescue may receive a severe shock. If rubber

gloves and wire cutters are at hand, the wire may be cut. If wire cutters are not available, then a dry pole or a piece of dry wood may be used for lifting the victim from the wire.

The moment he is free from the wire, he should be moved to a point of safety and artificial respiration given at once. If apparatus for administering artificial respiration is available, use it. Any case requiring artificial respiration is necessarily a serious one and is associated with shock. The victim must be kept warm by placing him between blankets or overcoats. The clothing around his neck, chest and waist must be loosened. The legs should be firmly massaged. Before starting artificial respiration, see that the victim's mouth is free of foreign bodies, such as false teeth, chewing gum, tobacco, etc., and see that his throat is clear of mucous.

After patient has been brought to, treatment should be applied for any burns he may have received.

3. Dust explosion is the rapid combustion of inflammable dust mixed with air.

Spontaneous combustion (properly termed "spontaneous ignition") is ignition of combustible materials caused by chemical action.

4. False; 5. False; 6. True; 7. True; 8. False; 9. True; 10. False; 11. True; 12. True; 13. True; 14. True; 15. False; 16. False; 17. True; 18. True; 19. True; 20. True; 21. True; 22. True.

23. . . . woven asbestos . . . solid metal . . . combination steel and asbestos.

24. . . . basement.

25. . . . have a charged line in readiness. . . .

26. . . . refer outside party to superior officer.

27. . . . interior. . . .

Brookline Tests New Pumper

A 1,250-gallon triple combination American-La France pumper was tested at Brookline, Mass., by Chief Seldon R. Allen. The apparatus has a sedan body and carries a booster tank.

Performance of the pumper in the various tests was as follows:

A. 1,670 gallons per minute at 148 pounds pump pressure; hydrant flowing pressure, 50 pounds. Engine speed, 1,900 revolutions per minute; pump speed, 2,863 revolutions per minute.

B. 1,266 gallons per minute at 135 pounds pump pressure; hydrant flowing pressure, 65 pounds; engine speed, 1,550 revolutions per minute; pump speed, 2,336 revolutions per minute.

C. 962 gallons per minute at 160 pounds pump pressure; hydrant flowing pressure, 75 pounds; engine speed, 1,625 revolutions per minute; pump speed, 2,449 revolutions per minute.

D. 1,868 gallons per minute at 143 pounds pump pressure; hydrant flowing pressure, 45 pounds; engine speed, 2,000 revolutions per minute; pump speed, 3,014 revolutions per minute.

E. 1,260 gallons per minute at 140 pounds pump pressure; hydrant flowing pressure, 70 pounds; engine speed, 1,575 revolutions per minute; pump speed, 2,475 revolutions per minute.

At the demonstration, which was attended by 1,200 officials and citizens, in one evolution the apparatus pumped at the rate of 1,868 g.p.m.

Bridgeport to Hold Tests

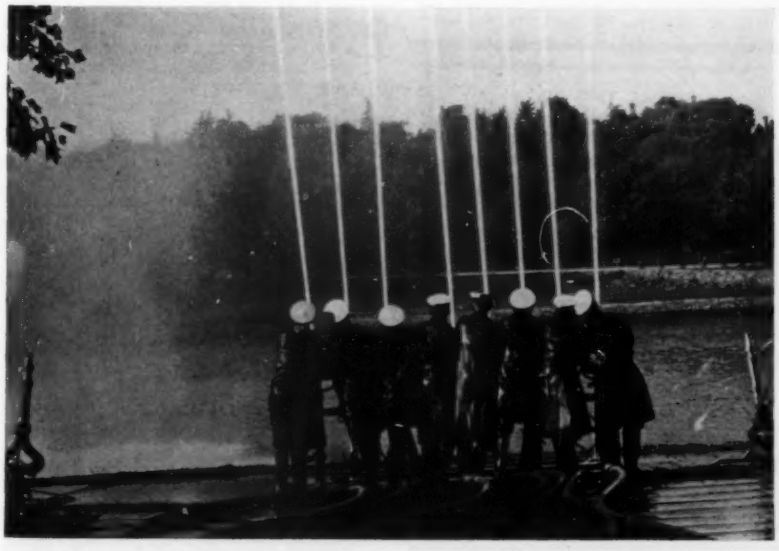
The first competitive promotion examinations since the Civil Service Commission was named will be held at Bridgeport, Conn., on November 27. Examinations will be given in the morning for pumper engineer and Captain, and in the afternoon fire-fighters and Captains will take the written tests for Lieutenant and Assistant Chief.

Appointments will be made at the minimum or entrance gross salary in the salary range. Advancements within the salary range may be made in accordance with civil service rules. The written examination will be on the knowledge and skills involved in performing the duties of the position, service record rating, senority, training, experience and general qualifications. Candidates will be required to attain at least 75 per cent in each announced subject. An examination fee of $3 must be paid for pumper engineer, Lieutenant and Captain, and a fee of $3.50 for those taking the Assistant Chief examination.

THOMAS F. MAGNER.

At the Demonstration of the Brookline Pumper

Left to right, Chief Alfred H. Koltonski, Rutland, Vt.; Chief Selden R. Allen, Brookline; Fire Commissioner Goode, Brookline; Chief Daniel B. Tierney, Arlington; Joseph Webber, Chief John W. O'Hearn, Watertown, Mass., and M. Norcross Stratton, Massachusetts Department of Education.



Eight Lines of 2½-Inch Hose, with One-Inch Tips, from Brookline Pumper During Test

The October Cover

The October cover of FIRE ENGINEERING illustrated a rather dramatic fire which broke out in the shipping department of the Union Petroleum Company, Philadelphia, in August, 1913, and threatened four city blocks. Before the blaze was under control it had destroyed three-fourths of the plant and did damage to surrounding property.

While the fire consumed sixteen 1,000-barrel tanks of lubricating oil, firemen succeeded in saving twelve tanks of 1,000-barrel capacity, which held benzine and naptha.

During the course of fire-fighting operations one of the large oil tanks boiled over and a wave of burning oil swept down a street. Firemen were forced to drop their lines and flee for their lives. Several were scorched, but none seriously.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

RESPONSE TO TELEPHONED FIRE ALARMS

OPERATORS at fire alarm headquarters have to do quick, clear, thinking. They have to make their decisions quickly, for time is a most important factor where fire is concerned.

But all amount of calm, logical reasoning will not supply the missing information when a resident uses the public automatic telephone, calls up the department, and says that he has a fire.

Since a large number of telephone alarms are received each day, a number larger than most persons believe, it is necessary that precautions and practices be followed that will result in the prompt dispatch of fire companies, and the least number of mistakes.

The problem that is discussed in this issue appears in full in the box on this page. It is a continuation of the discussion in the previous issue. In the box on the following page is the question that will be treated in the coming issue.

Discussion of the Question

Charles E. Schrom, Chief, Washington, D.C.: During the fiscal year ending June 30, 1937, this department received 1,936 alarms through fire alarm boxes and 3,740 over the telephone or by verbal notice direct to fire stations. Locations of telephoned fire alarms are recorded in Fire Alarm Headquarters, manually by the telephone operator and by the fire alarm operator as they are received. They are verified by careful repetition. We have had very few complaints with regard to receiving the correct location.

I do not believe experience here would indicate any requirement for reporting telephone alarms automatically on dictating machines or similar equipment.

R. B. LeVino, Chief, Mamaroneck Township, N. Y.: Inasmuch as this department maintains no fire alarm boxes, all alarms are received by telephone. For this purpose two lines are available for fire service only, in addition to lines for general calls. When receiving a telephone alarm, the desk man asks for, and records the name and address of the calling party, as well as the name of the nearest cross street to the location of the fire. The latter provides a check upon the correctness of the given address.

We have an arrangement with the telephone company whereby any call made to either of the fire service numbers is noted by central, who makes an immediate written record of the number of the calling party and the time of the call. Verification of any call requires contacting the Chief Operator, who ascertains the origin of the call within a few seconds.

Our experience would indicate that failure to receive the location of alarms correctly by telephone lies not with the desk man, but with the calling party. Some, in excitement, give insufficient information with which to ascertain the correct location, others, especially the foreign-born, are difficult to understand.

In view of our experience, I cannot see the value of automatically recording the receipt of telephone alarms. I do believe, however, that there is need of some method whereby the origin of a telephone call could be given the desk man immediately upon termination of the call. Doubtless such a method is beyond the possibilities of automatic operation at this time, although it might be accomplished manually through the facilities now available to the telephone companies.

James G. Hogan, Chief, Bayonne, N. J.: About 2.5 per cent of alarms received are received over the telephone. We record street box alarms, telephone alarms and verbal alarms separately and in this way are in a position to know just how many alarms are received by each of the three mentioned methods.

Fire Department switch board operator repeats to the telephone exchange operator the telephone message they have received from the telephone operator before companies are dispatched, so as to verify the telephone call from telephone exchange.

Excited persons often have given wrong or no addresses, causing delay until we can trace the call through telephone exchange operator.

I believe there is a need for a similar machine to the commercial dictating machine for recording telephone alarms. There would then be positive proof of the way a telephone call had been given. Under the present system the responsibility rests, first with the person sending the alarm of fire, second with telephone exchange operator transmitting the call, third with the Fire Department operator receiving the call, and fourth with the fire company desk watchman. In all there are too many agencies involved and a mistake is apt to occur.

John H. Monroe, Chief, Savannah, Ga.: Telephone calls for reporting fires average about sixty per cent of the total. All telephone calls are recorded in the daily log.

When a call is received reporting a fire, we request the party sending in the alarm, to give the number of the telephone being used. We ask them to stand by. We verify this call and then dispatch the equipment. If the request for the number is refused, we do not respond. We, of course, use common sense in judging the mental attitude of the party sending in the alarm, and it is only when we get a direct refusal in a request for the number that we do not respond. Percentage of complaints are practically nil.

As the present system is proving successful, we do not think a change at this time would be beneficial.

F. W. Donnelly, Acting Chief, Lincoln, Neb.: About 98 per cent of our alarms are received by telephone. The other two per cent is received by automatic sprinkler directly connected to alarm office, automatic sprinkler alarms through A.D.T. office, A.D.T. call boxes and aero automatic alarms through A.D.T. office. The city of Lincoln does not have a fire alarm system other than telephone. Our old

HERE IS THE PROBLEM

About what percentage of alarms do you receive over the telephone?

What procedure do you employ in recording telephoned fire alarms?

Have you found any effective method of verifying them? If so, how is it done?

Have you had any complaints of the Fire Department failing to get location of fire correctly over the telephone?

Do you believe there is need for some method of accurately recording telephone alarms automatically as they are received (i.e., on machines similar to commercial dictating machines)?

box alarm system was discontinued two years ago. Due to the obsolete type, repairs could not be made. Funds were not available to purchase a new system and consequently we depend wholly upon the telephone.

We have no means of recording telephone alarms, nor an effective method of verifying them. We have had numerous complaints and wrong locations and delays.

There is an urgent need of a method to accurately record telephone alarms and I am of the impression that there are instruments, such as automatic recording machines, which can be used in conjunction with the telephone that will record correct location in the exact words of the sender. It could also record the time the alarm is received. Such a device in my opinion would be a boon to the fire service.

Wm. J Sands, Chief, Quincy, Mass.: Sixty per cent of our alarms are received by telephone. Telephone calls are received by the fire alarm operator and then relayed by teletype to each station in the city simultaneously. This teletype alarm is followed with the nearest box to the fire location and is transmitted by the fire alarm operator as a check up of the teletype message.

There is no effective method of verifying telephone alarms of fire. The location telephone operators, if the call is given "Emergency Fire," have instructions from the telephone company to listen in and if necessary to give the location of the call to the Fire Department.

Recently, in a case where there were two streets with the same name in different parts of the city, the party making the call, possibly being excited, did not name the part of the city in which the street was located, and the fire alarm operator was forced to dispatch fire companies to both locations in order to be certain. This has happened a number of times. Fortunately, no lives have been lost by such mistakes.

I believe there should be some method for automatically recording of all telephone calls received by the Fire Department. At least the telephone operators should list every call received by the Fire Department and be forced to give the location of the call if demanded by the proper Fire Department members.

Howard Travers, Chief, Baltimore, Md.: Approximately 45 per cent of the alarms received are transmitted by telephone. Upon the receipt of a silent alarm, the nearest company is notified of the location by telephone and an entry made in the daily log at fire alarm office, stating time of call, location of fire, and company dispatched.

The fire alarm operator receiving the call will ask the name of the nearest intersecting street to the address given. With this information, misinterpretation of numbers are easily detected.

An automatic system of recording telephone calls is needed in this city, but may be beneficial in other cities where a large number of telephone alarms are received.

Edwin P. Erby, Superintendent of Fire, Allentown, Pa.: The Allentown Fire Department answered 343 alarms during 1936, 221 of these alarms were by telephone. All alarms are transmitted from our modern alarm station by three operators, working eight-hour shifts. Upon receiving an alarm via telephone, the operator immediately dispatches two triple combination truck companies to the reported location. These officers upon arriving at the scene of the fire, will pull the box alarm if the situation warrants it.

We have no effective method of verifying telephone alarms. Our alarm operators are trained men and they always caution excited persons to remain calm and repeat the location. There was one error in dispatching the company in 1936, where Sixteenth Street was understood as Sixth Street.

We believe there is a great need for installing some method of verifying fire calls that come in by phone. Accurately recording telephone alarms automatically would be an asset to every Fire Department in reducing fire loss due to delayed alarms.

R. J. Scott, Chief, Los Angeles, Cal.: We receive about 70 per cent of the fire alarms by telephone. Telephone alarms when received, are recorded by an electric time stamp on our regular fire report when alarms received. The location is written on this report by the dispatcher.

We have no way to verify telephone alarms, except by reference to map, or if additional calls are received for the same location. Complaints are rare of our failing to get location of fire correctly over the telephone.

We are not aware of any developed method for the automatic recording of telephone alarms. There would seem to be no basic difficulties to overcome, and such a device would be in my opinion a step in the right direction.

Irby Klinck, Chief, Memphis, Tenn.: Ninety per cent of all alarms received are transmitted via telephone. We record them the same as box alarms; that is, fill in fire report card for a telephone alarm instead of a box. Verification is secured by obtaining the street number and the nearest cross street from the person reporting the fire.

There is need for an automatic means of recording such calls. The alarm dispatcher must ask certain questions of a person reporting a fire and if such a machine was available that would accurately record these questions and answers, I believe there would be a place in the fire service for it.

Charles L. McCarthy, Chief, Worcester, Mass.: About 60 per cent of the fire calls are sent in by telephone. In recording telephone alarms we follow the same procedure as on any still alarm. It is designated as a still alarm. We have had some complaints. The nature of most complaints is that the party calling delays too long and then is so excited that no one can decipher what they are trying to say. Consequently the location is badly garbled.

If an automatic method of recording telephone alarms was developed it would help materially. My personal opinion is that the fire alarm box is still the best method available for turning in an alarm of fire.

Wm. J. Lutz, Chief, Wilmington, Del.: Forty-two per cent of the 890 alarms sounded for all types of fires in this city were by telephone calls (for year ending June 30.) Alarms by phone are received by operator at "Central" and relayed to company nearest location. A box alarm in the fire district follows.

We have found no effective method for verifying fire calls by 'phone and received false calls nine times during this same period. There have been instances where 'phone calls have been misunderstood and wrong locations taken, but very few. The possibility of misunderstanding names of streets which are similarly sounding is ever present and is a problem.

There is in my opinion a need of some method for recording telephone calls automatically and the improved and latest in the Teletype is the answer to the question. This makes possible the correct location being received and all companies know the movements of all companies on the system. Much time would be saved in the coverup when other alarms follow one or more telephone alarms.

A. C. DuRee, Chief, Long Beach, Cal.: For the past five years the percentage of telephone alarms received are as follows: 1933—86 per cent of the total alarms received; in 1934, 89 per cent; in 1935—87.5 per cent; in 1936 91 per cent and in 1937, 93.2 per cent. No method of actual recording telephone alarms as received is available in our department. We merely note the location as coded on the daily log sheet of the dispatcher. The only verification usually received, is that a visible fire is usually reported by more than one person. Telephone alarms in general have been very successful. Occasionally an individual number may be misunderstood, but no failure to get the approximate location has been made.

Due to the fact that the telephone is the most common method of communication, and the average person feels they are assured they have sent their message direct to the Fire Department, I firmly believe there should be some method for automatically recording such messages.

Following is our method of receipt and transmission of telephone alarms. A city map is divided into 31 zones. Each zone represents a different combination of apparatus responding; run-

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What method do you employ for making sure that the motors on apparatus will at all times start instantly?

Which do you consider the better practice: (1) Starting motor twice a day at change of platoons or, (2) A road test of say half an hour once a week?

Do you believe that starting a motor twice a day, especially where there are very few runs, is harmful to the machine?

If so, why?

ning cards listed by zone numbers giving 1st, 2nd, 3rd and 4th alarm assignment; also move-ups on each alarm; four tap box for alarm system; universal broadcast switch on PBX and for talk alarm system and dummy plugs on PBX.

A telephone call is received on one or more trunk lines, four of which are reserved for emergency calls. The dispatcher assures himself of the location given by the party calling. If more than one trunk light shows, he answers these to verify the first call. He then checks the location given on the zone map to ascertain the zone number.

The handle on the four-tap box is pulled, sending four taps on the alarm system connecting all twelve stations. This four tap on the station gong is a warning call that a fire call is coming through. The officer in charge of each station immediately goes to the telephone and listens for the location to be given. No conversation by the officers is allowed until the completion of the broadcast by the dispatcher. The dispatcher plugs in the broadcast switch, which ties all twelve stations together, so the location is received by all at the same time. The dispatcher gives the location thus: "House fire—zone 15-725 Newport Ave.; Zone 15, 7-2-5 Newport Ave." This is repeated four times.

The companies assigned to zone 15 on the running card immediately respond without further orders. If the location is not distinctly understood, the officers remain on the telephone until the broadcast is finished, then the dispatcher gives him the location individually. Where a company responds, the officer leaves his telephone receiver off the hook, which shows a light on the PBX Board, for that company. The dispatcher then places a "dummy" plug in this station, to cut out the light and buzzer. This plug is left in until the company returns, which gives visible evidence of what companies are out in case of another alarm.

Thirty seconds is the average time between receipt of the alarm until the finish of the broadcast.

Public address amplifiers are being installed in each station to operate over the alarm system, which will give double assurance of the message being received correctly.

W. E. Fenton, Secretary, Fire Department, Akron, Ohio: We have a radio public address system from our fire alarm office to all of our fire stations. When a telephone alarm is received over our private branch exchange in our fire alarm office, same is broadcasted over our public address system to all fire stations at the same time. We very seldom have any complaints of our fire station failing to receive telephone alarms correctly.

F. W. Bender, Jr., Chief, Saginaw, Mich.: About 80.5 per cent of our alarms are received by telephone, 15 per cent of which is not transmitted in a manner satisfactory to the department. The outside cover of the location telephone directory carries the notation: "Customers may dial 'O' (Operator) and pass an emergency call to her." When alarms are transmitted in compliance with the telephone company's notation, through the telephone operator, the fire alarm dispatcher is deprived of personally contacting the person phoning the alarm, which prevents the department ascertaining the kind of fire. As a result of this, several engine and ladder companies are dispatched only to find an insignificant **auto fire.** All of which cost the taxpayers large sums of money annually to say nothing of the traffic hazards involved.

In the transmission of fire alarms by telephone, you always have that ever present possibility of someone failing to distinguish "Johnson" from "Thompson" and "Seventh" from 'Eleventh," etc.

In my humble opinion, the receipt of firm alarms by way of the fire alarm telegraph system is, by far, the more satisfactory and dependable mode of transmitting fire alarms.

J. G. Sarran, Chief, San Antonio, Tex.: Ninety-five per cent of the alarms received during 1936 came over the telephone. So far in 1937, which includes only nine months, there have been a percentage of 97.4% telephone alarms. The fire alarm operators accepts and records such calls and sends alarm over our belt line. We have been unable to find an effective method of verifying them. Our local telephone company employs the automatic dial system. We have had very few complaints due to our failing to get location of fire correctly over the telephone. An accurate recording machine for telephone alarms, I believe, would be a forward step.

Wm. Lutkey, Chief, Oakland, Cal.: We recommend in our public relation work, that after a still alarm has been sent, that someone immediately transmit an alarm from the street box.

J. E. Parish, Chief, San Diego, Cal.: During the fiscal year of 1936-37 80 per cent of our alarms were received via telephone. Telephone alarms are listed on the operators daily report. We have made no attempt to verify the telephone alarms we receive, as a relatively small per cent of them go wrong or are "false alarms." In the past several years we have had only one or two instances where a complaint has been made that the Fire Department failed to get the alarm properly. Even then the fault lay in the hysteria of the person phoning in the alarm. There is some supervision of 'phone alarms received by us, this coming through the supervisors of the telephone company. I cannot see any present need for automatic recording of 'phone alarms.

J. Reilly, Chief, Yonkers, N. Y.: Seventy per cent of the alarms received are dispatched over the telephone. In recording telephone fire alarms we telephone first company due, then send out the box call. We do not verify such alarms.

Val Fendrick, Chief, Bureau of Fire Alarm Telegraph, New York City: Thirteen per cent of our alarms are received over the telephone. Such alarms are recorded on special forms. We have not found an entirely satisfactory method for verifying such alarms, as with the dial telephones it is practically impossible.

E. L. Layne, Superintendent, Fire & Police Telegraph, Denver, Col.: Approximately 85 per cent of the alarms received are sent over the telephone. Such alarms are manually recorded by operators. No effective method of verification has been instituted. We have numerous complaints, due to failure of individual to give proper location for various reasons.

A machine, such as a dictaphone, would facilitate the receipt of telephone alarms, by accurately recording the location as given, thus eliminating one element of human error.

M. T. Keena, Chief, Hartford, Conn.: In all, 40.9 per cent of alarms received are dispatched by 'phone. When such an alarm is received, the time received on the telephone board is recorded. It is also carried on the day sheet, and the company responding trips an auxiliary pull box notifying all other companies they are leaving quarters. If the public utility operator stays in on the line when an alarm is being given, it is the only method we have of verifying such calls. Very seldom do we receive complaints.

If it were possible, without causing delay to responding companies, an automatic recording machine for such devices would be helpful.

J. J. Gilday, Chief, Hoboken, N. J.: About two per cent of the total alarms received are sent over the telephone. We follow the same procedure in recording telephoned fire alarms as bells. We verify such calls by repeating to the caller, the information he gives. We have had no complaints as yet. An automatic recording machine for telephoned alarms would be a good idea.

J. C. Sullivan, Chief, Lowell, Mass.: Three-fourths of the alarms come in on the telephone. The telephone operator keeps a record of such calls and the Captains send in reports of the calls. We have very few complaints of not responding promptly to such calls. It would be a good method if an automatic recording machine were available for such alarms.

C. L. Ingram, Chief, Montgomery, Ala.: Telephone alarms in our department total 90 per cent of the total of alarms received. We separate box and telephone alarms on our fire reports. The telephone operator makes a record of fire calls. We have eight men listening in on all fire calls and we verify calls to one another if there is any confusion. We have very little trouble.

A method to accurately record telephone alarms automatically as they are received would be essential where only one man is listening in as a switch board operator.

T. F. Burns, Chief Bridgeport, Conn.: Fifty per cent of our alarms are received over the telephone. We record telephoned fire alarms in the book. We always ask the party telephoning an alarm to repeat the message and we ask for the nearest cross street to the location of the fire. It has proven quite effective and we have very few complaints. A method of automatically and accurately recording such alarms might be very beneficial.

W. R. Castimore, Chief, Buffalo, N. Y.: There is an average of about 40 per cent telephone alarms. The operator receiving the alarm makes a double entry in the journal. We very seldom have a complaint; if the operator is in doubt as to the proper street, say for instance Reid or Rease, he asks for the nearest cross street. In this way a mistake is seldom made.

Such a device as you mention would not be justified for the reasons stated. The results would not justify the expense.

F. W. Bennett, Chief, Durham, N. C.: Forty per cent of the alarms received are transmitted by phone. They are recorded on alarm report blanks. We check such calls by special telephone arrangements for fire use only. They are traced by the telephone company. An accurate recording of telephone alarms automatically as they are received, would be beneficial.

Albert W. Rowe, Chief, Terre Haute, Ind.: During 1936 of the 1,061 alarms received, 809 were telephone alarms. Fire alarm operator pulls key locking connection, automatically notifying the telephone company to trace the fire alarm call. The information is available in two or three minutes. This field, however, is always open for improvements.

* * *

Answers to Previous Questions

The following replies were received in answer to a previous question on salvage work in the department:

G. L. Mathews, Chief, Pocatello, Idaho: We perform salvage work in our department. We have five covers and they are carried on the chemical and pumper apparatus. The useful life of such a cover is about five years. The use of such covers saves considerable water damage.

C. G. Hamel, Vice-President, Fire Department, Manhasset, L. I.: Salvage work in the Manhasset-Lakeville Fire Department is done by one of our fire-police units.

This unit consists of firemen especially trained in police, rescue and salvage maneuvers, and a specially equipped truck containing flood lighting equipment, rescue tools, and 12 salvage covers. These covers have been in service a little over three years and only one has been damaged at a very hot fire. The police unit rolls to all building fires and the crew immediately starts rescue and salvage work.

Since the unit has been in operation, there has been a considerable decrease in the amount of property damage and the taxpayers and insurance companies are greatly pleased.

R. A. Bogan, Chief, Baton Rouge, La.: We do salvage work in our department. We have thirty-two covers and three are carried on each engine company (we have five such companies) and seventeen on the ladder truck. With proper care, a cover will be useful for seven to eight years. One of the greatest ways of selling your department to your city is by performing salvage operations.

J. L. Murphy, Chief, Kingston, N. Y.: Salvage work is performed in our department and we have twenty-seven covers which are carried on trucks and engines. We have some covers in service for twelve years and they are still in good condition. Salvage work protects contents of buildings both in homes, business places and factories. It also saves and protects uninsured household furnishings and reduces the fire loss. There is a great satisfaction in doing a good job in saving water damage and having satisfied taxpayers.

J. A. Roberts, Chief, Tucson, Ariz.: Salvage work is performed by our department. We have six covers carried on all apparatus. Five years is considered the useful life of a cover. The benefits resulting from a department doing salvage work is that it lowers losses.

Edward F. Dahill, Chief, New Bedford, Mass.: We do salvage work in our department. We have 120 covers, each truck carrying eighteen, each engine company has two, and each hose company two. We consider the useful life of a cover to be ten years. There are many benefits resulting from salvage operations, the foremost being the saving of water damage to merchandise and furniture.

H. Rudolph, Chief, Paducah, Ky.: We do perform salvage work in our department. We have eight covers, and they are carried on the service truck and in the Chief's car. A cover will last longer if it is given good care. Salvage work results in a great saving from water damages.

A. W. Rowe, Chief, Terre Haute, Ind.: We perform salvage work and have twelve covers which are carried on the trucks. With good care, a salvage cover will last from six to eight years. Salvage work results in the department having a pride in its work; it also sells the department to the public and cuts down fire and water losses.

F. J. Roddy, Chief, Monroe, La.: Salvage work is performed by our department. We have fifteen salvage covers. Two are carried on each engine and eight by the ladder company. With proper care a cover will last five to seven years. Salvage work results in a lower fire loss and the department is more respected by the public.

S. J. Flores, Chief, Shreveport, La.: We do salvage work. We have sixty covers. All apparatus carry such covers. Salvage covers will last anywhere from five to seven years. Salvage work saves thousands of dollars worth of property.

J. C. Sullivan, Chief, Lowell, Mass.: We do salvage work. We have twenty-four covers and they are carried on the squad wagons which respond to all alarms. I would say that a cover would be useful for five years. However, this depends entirely upon its usage. The fire losses are reduced to a large extent if salvage work is carried on in a department.

E. T. Rose, Chief, Wheeling, W. Va.: Salvage work is performed by our department. We have sixteen covers carried on the ladder trucks and squad truck. If properly cared for, a cover will last about ten years. Salvage work holds down the fire loss and gives the taxpayer a "run" for his money.

E. I. Kingsley, Chief, Aberdeen, S. D.: Our department performs salvage work. The pumpers carry the salvage covers. A cover will last several years if well taken care of. Benefits of such work are considerable. It reduces loss by water and leaves the job in a much cleaner condition.

E. C. Speakman, Chief, Coatesville, Pa.: We have just started performing salvage work. That is, we secured six salvage covers about six weeks ago. They are to be carried on our scout car.

Cover Illustration

Fire, together with an explosion, at the plant of the Celluloid Corporation, Newark, N. J., on October 4, did $25,000 damage and claimed the life of one fireman. He died of injuries received when the brick wall shown in the illustration was blown out by the force of the blast. Fourteen workers and four other firemen were injured. The building was used as a shipping point and for storage.

Martinez, Cal., Has Active Fire Prevention Week

Several special window displays, one of which is illustrated, were arranged at Martinez, Cal., as part of Fire Prevention Week. In addition, talks were given at the five schools, and demonstrations made of first aid appliances, and fire alarm boxes. Martinez, a city of 10,000 population, has a department of twenty-five members, of whom five are paid. John Briones is Chief.

I. A. F. C. Moves Ahead

(*Continued from page* 594)

volved in modern fire alarm systems, according to Mr. Hutson, are: A definite signal which correctly locates the

Chief Daniel B. Tierney, President-Elect of the I. A. F. C.

point from which it was sent; a mechanism at the point of transmission which anyone can use, whether literate or illiterate, or speaking English or some other language; construction of a type and of such material that interruptions in service should not occur; good maintenance without excessive cost, and operation which could be made automatic or which does not require a large amount of rehandling.

"When this subject of the future of fire alrams service was assigned to me," said Hutson, "my first reaction was to analyze the functions of fire alarm service, and, through this analysis, try to decide what various features of present systems or what functions now used would be incorporated into the fire alarm of the future.

"The more this subject is studied the firmer the conviction becomes that there is no future for fire alarm service unless there is an awakening on the part of the Fire Chief to the fact that it is boxes that make a fire alarm system. Beautiful, elaborate and expensive headquarters equipment may be something to point to with pride, but it is the simple little box on the pole or pedestal that means most to the citizen. From a purely selfish standpoint, every Fire Chief should be strong for more boxes. Even though he may receive every or nearly all alarms by telephone there is still the need, which only a good fire alarm system will give him, of having readily available some means of communication between the fire ground and the various fire stations.

"There are several features which the fire alarm system of the future will have, such as the dispatching of fire apparatus by voice, as with loudspeakers, and the use of radio to keep the chief officer in touch with headquarters." Mr. Hutson added further: "The future for fire alarm systems can be summed up as follows:

"That for the degree of protection which any community should have, a municipally controlled fire alarm system is essential.

"That the greater the values involved, the more important the system becomes.

"That such systems must be kept simple, but must also incorporate any new ideas which experience indicates are improvements.

"That such systems can be most economically operated when combined with police emergency signalling.

"That alarm service systems are of value in proportion to the number of transmitting stations available to the public.

"This last means that fire alarm systems must have boxes, and more boxes, to be of real worth to the public, and to the fire department."

George E. Morley, Fire Alarm Engineer, had been appointed a committee of one by the President of the Association to contact telephone companies and discuss the matter of telephone fire alarms with them.

Cooperation with Telephone Company

He was asked to present a report of his findings. "There is a general feeling in the fire service," said Mr. Morley, "that the use of the public telephone for reporting a fire is not as dependable or its transmission from the fire alarm office to the different companies as satisfactory as those received and retransmitted over the conventional municipal signalling systems now in use, and it has been claimed that the introduction of the new automatic dialing systems has made them less reliable, although a properly transmitted and handled telephone alarm has certain advantages over the conventional box alarm."

It was suggested to the telephone company that possibly a special signal digit on the dial might be exclusively used for fire calls. The engineers of the telephone company explained why this would be impossible.

Mr. Morley further added: "The general efficiency of the large percentage of telephone calls could be improved:

"If officials would provide operators of the highest type, men who can take the initiative, and follow the plan of a midwestern city which trains operators especially to answer fire calls in a clear, gentle manner, so as to keep the party on the other end of the line from getting excited and losing his head. Such an operator would say: "This is the Fire Department. Do you want to report a fire?' After getting an affirmative reply the operator then asks for

Some Well-Known Figures at the I. A. F. C. Convention

Left to right—Chief Irby Klinck and Judge Clifford Davis, Com'r of Public Safety, Memphis, Tenn.; Chief and Com'r J. J. McElligott of New York City, wearing his ten-gallon convention hat; G. H. Coates, of Fulton Bag and Cotton Mills, Atlanta, with Salvage Chief J. T. O'Donnell of St. Louis.

Delegates and Guests at the International Association of Fire Chiefs Convention, A

the street, the number, and what cross street or large building it is near, and lastly, 'Can you tell me what is burning?'

"Provide sufficient special trunk lines for exclusive use on incoming telephone alarms, and follow the rules of the National Board of Fire Underwriters on telephone alarms as recommended in their Red Book on municipal fire alarm systems issued September 1, 1934.

"Install a voice amplification system for retransmitting alarms from the fire alarm office to the different companies.

"Install a recording system that a permanent record can be made and retained for future reference, of all telephone alarms received and voice amplification alarms and orders issued by telephone.

"Educate the public to call the telephone operator, to make the connection, if they want to report a fire by telephone."

The suggestions made by Mr. Morley were widely discussed, this discussion being participated in by Chiefs Frock, Brockwell, Foster and Sullivan.

Fighting Oil Well Fires

Under the above title, Chief R. W. Granger of Tulsa, Oklahoma, discussed the fighting of fires in oil refineries. Tulsa has some of the largest oil refineries in the country, and at times has had as much as 30 million gallons of gasoline stored within two miles of the heart of the city.

"When a fire occurs in a refinery," said Chief Granger, "instead of rushing up to the fire, as is the usual fire department custom, the men of the refinery fire department go back to the control house, where they open a series of valves that cut in a gigantic flow of foam to the tank or tanks involved by fire. These refineries also have batteries of CO_2 and have steam lines as well.

From one central control station the superintendent of the refinery supervises the opening of these various valves, the starting of the pumps, and in the majority of cases no man ever goes close to the fire itself."

Chief Granger pointed out that the first order given by the refinery officials in case of fire is to lock the gates and not let the city fire department in. However, after a fire gets beyond control of the refinery fire department, and they want to wet down some tanks and keep them cool, the municipal department may be called. The chief reason for keeping the municipal department out is to protect them against accidents, it being felt that the refinery fire fighting force knows better the location of hazards than would the municipal department.

Fighting Oil Well Fires

Chief George Goff, of Oklahoma City, ably described the handling of oil well fires. The Oklahoma City field was discovered December 4, 1929, about four miles to the southeast of the city. It was then extended in all directions until the formation pinched out, or until salt water was encountered. As the oil field extended toward the city, subsequent to its discovery, the fire department had time for preparedness and to observe the different hazards connected with oil well drilling. The department also operated at several major fires in wild wells before the drilling reached the city limits. "This, of course, was beneficial to the department, even if there was a tremendous loss of property," said Chief Goff.

"During the high pressure gas period, shortly after the discovery of the oil field, when a well was wild or become loose by faulty connections, oil and gas was blown so high that it was known to carry so far as twenty-six miles to the leeward.

"This, of course, was hazardous, and a lighted match in the area where gas was concentrated would have been disastrous. This was eliminated by constant patrol of the affected area, not allowing anyone to enter this area except authorized men.

"At the time some of the wells went wild they caught fire from sparks caused by rocks hitting steel, and in other ways.

"The heat generated was so intense that the steel derrick and other tools became red hot and failed structurally, causing the derrick to buckle and collapse, leaving a tangled mass of steel right over the hole, causing the flame to flare out in almost every direction, like an immense torch.

All of this debris and machinery had to be moved away from the well before the fire could be extinguished. All of the oil-covered area around the well has to be blanketed with foam to smother out the flame and prevent a flash-back; that is, if it is not readily whipped out with the water lines.

"To do this, high-pressure streams

Outstanding Chiefs at Convention

Left to right—Top—Three active chiefs who have been I.A.F.C. members more than thirty years—Geo. Johnson, Waltham, Mass.; Geo. M. Kellogg, Sioux City, Ia., and Hugo R. Delfs, Lansing, Mich. Center—Roy Mottesheard, Dearborn, Mich., newly elected I.A.F.C. first vice-pres.; Earl Traeger, Minneapolis, and Peter Steinkellner, Milwaukee. Bottom—Wm. H. Gardner (Fire Patrol), Kansas City, Mo.; T. J. Hardwick, Kansas City, Mo., and John J. O'Boyle, St. Louis.

were used to form a protective curtain over the men, who wore asbestos suits while they cut the steel mass with acetylene torches, and hooked on to them with tractors and winches to pull them into the clear.

"Of course, the oil companies furnished all available men to help, as it was necessary to throw up levees and dig ditches to control the flow of sur-

(*Continued on page 621*)

iefs Convention, Assembled in Front of the Oklahoma City Municipal Auditorium

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Spontaneous Ignition of Charcoal

To the Editor:

Will you kindly complete the following question which was given at a recent examination?

Charred wood may ignite itself, through absorbing air, if it is ———.

E. R. K.

Answer: The spontaneous ignition of charcoal is produced by rapid absorption of oxygen. If charcoal is heated, and then quickly cooled, the sudden absorption of oxygen raises its temperature to the ignition point. In the case of wood charred at relatively low temperature, if charcoal is kept heated (but below the ignition point), it will not ignite, but as soon as the heat is turned off, and it begins to cool, it will absorb oxygen. The more rapidly it cools the more rapidly the oxygen is absorbed.

Hence the missing words in the statement are: "heated and then permitted to cool quickly."

Standpipe Pressure Problem

To the Editor:

What engine pressure is necessary for a 1,000 gallon pump hooked to a hydrant 500 feet away and pumping into a standpipe of a building 175 feet high, at the top of which is a 100 foot line with a 1⅛-inch tip, carrying a desired nozzle pressure of 50 pounds?

Also the same problem, except that two 750 gallon pumps are located at two different hydrants 500 feet away.

J. N. S.

Answer: Before starting the calculations, there are one or two points I would like to make. The distance from the engine to the standpipe connection is given as 500 feet. We will therefore assume that a 500 foot stretch of hose is needed, although in practice we would probably use 550 feet.

The diameter of the hose on the roof of the building is not indicated, so we will assume that it is also 2½ inches. The height of the building is given as 175 feet and it is assumed that the line is attached to the outlet on the roof, which would make the outlet on the roof approximately 175 feet above the outlet on the engine.

The engine pressure is made up of three factors: nozzle pressure, the friction loss in the hose line and standpipe and the back pressure in the standpipe.

The usual method for solving such a problem is to find the engine pressure necessary to overcome friction loss in the hose line alone and give the desired nozzle pressure. To this engine pressure would then be added friction loss in the standpipe and the back pressure in the standpipe.

Friction loss in the standpipe system is usually taken at 25 pounds, although it may vary more or less depending upon the number and sizes of streams taken from it. However, 25 is usually taken as a fair average.

The back pressure in the standpipe, due to the 175 foot elevation of water, is equal to 175 × .434, or 76 pounds approximately.

Solving for the engine pressure necessary to overcome friction loss in the hose line and give 50 pounds at the nozzle we proceed as follows:

Total length of hose = 500 + 100 or 600 feet.

E.P. = N.P. × (1.1 + K L).

Where K is the factor depending upon hose and nozzle diameters, and is, for 2½-inch hose with 1⅛-inch nozzle, .167.

L, the number of 50 foot lengths of hose in the line is 600 divided by 50, or 12.

Then engine pressure
= 50 × (1.1 + .167 × 12)
= 155 pounds.

Add to this the friction loss in the standpipe and the back pressure in the standpipe and we have

E.P. = 155 + 25 + 76 or 256 pounds.

This is the pressure needed at the engine to give 50 pounds at nozzle.

Where two engines are employed, each 500 feet from the standpipe, and each pumping through a single line of 2½-inch hose, the method of calculation is as follows:

First combine the two parallel 500 foot lines of 2½-inch hose into a single line. This is done by dividing 500 by 3.6, giving us 139 feet. In other words, from a friction loss standpoint, the parallel lines of 2½-inch hose are equivalent to 139 feet of single line of hose.

Then the total length of hose in the line will be 139 + 100, or 239 feet. L = 4.78

E.P. = 50 × (1.1 + .167 × 4.78)
= 50 × 1.898, or 59 × 1.9, giving us 95 pounds.

This is the engine pressure necessary at each of the engines to pump through the line and give 50 pounds at the nozzle. To this must be added the friction loss in the standpipe, and the back pressure in the standpipe.

Thus the corrected engine pressure will be 95 + 25 + 76, or 196 pounds.

ALAM Horsepower Rating

To the Editor:

In the formula for figuring horsepower in gasoline engines (bore × bore × number of cylinders) ÷ 2.5, where "bore" is the diameter of cylinders in inches, nothing is mentioned about the length of the stroke. Could this formula be used for all gasoline motors regardless of length of stroke? Is there any connection between the 2.5 in the formula to the length of stroke? C. K.

Answer: While nothing is mentioned about the length of the stroke in the ALAM formula for automobile engine horsepower, this figure is taken in indirectly. The formula assumes that the mechanical efficiency times mean effective pressure equals 67.2. It also assumes that the piston speed is 1,000 feet per minute.

Because it makes these assumptions, the formula is very inflexible, and does not make allowance for longer stroke engines. In other words, all engine pistons are assumed to travel at the speed of 1,000 feet per minute.

A far better gauge of engine power is the indicated horsepower; even better, the brake horsepower.

Engine Pressure for Parallel Lines

To the Editor:

I would apprecite your answering the following questions:

1. How do you figure the required engine pressure with the following layout: Two single lines of 2½-inch hose, both 500 feet long, with two 1¼-inch nozzles and 40 pounds on each nozzle.

2. How do you figure the required engine pressure with the following layout: Three single lines of 2½-inch hose, with 500 feet in each line, with three 1¼-inch nozzles and 40 pounds on each nozzle.

3. How do you figure the required engine pressure with the following layout: Four single lines of 2½-inch hose, with 500 feet in each line, with four 1¼-inch nozzles and 40 pounds on each nozzle. W. E. W.

Answer: Where the engine is supplying a single line of 2½-inch hose, 500 feet long, 1¼-inch nozzle, 40 pounds nozzle pressure, the solution for engine pressure is as follows:

E.P. = N.P. × (1.1 + K L).

Where K is a factor depending upon hose and nozzle diameters, and is, for 2½-inch hose with 1¼-inch nozzle .248; L, the number of 50 foot lengths of hose in the line, is 10.

Then engine pressure = 40 × (1.1 + .248 × 10).
= 40 × 3.58.
= 143.2 pounds

engine pressure.

If you had two identical lines with same sizes of nozzles attached to the pumper and each nozzle had a pressure

of 40 pounds, the engine pressure would be 143.2 pounds as in the formula above.

If the engine was operating through three lines, each identical, and with the same size nozzles, and 40 pounds pressure was on each, the engine pressure would again be the same as above, namely, 143.2 pounds.

Whether one, two, three or four lines are used, as long as each is the same length, the same diameter and has the same size nozzle, and also the same nozzle pressure, the engine pressure will be identical in any case.

Losses Go Down

According to figures published by the National Board of Fire Underwriters, fire losses in the United States for September were estimated at $19,349,756. This showed a decrease of $1,063,781 or 5.2 per cent from the losses of September, 1936, and $417,558 or 2.1 per cent from the losses of August, 1937.

This is the fifth consecutive month that the losses have been less than the corresponding month of the previous year. The total for the first nine months of this year is $10,000,000 less than for the same period last year.

The following table shows the losses for the first nine months of 1936 and 1937:

	1936	1937
January	$27,729,930	$25,069,895
February	30,909,896	28,654,962
March	29,177,406	29,319,029
April	25,786,835	26,663,854
May	21,479,380	21,437,739
June	20,407,485	19,524,765
July	22,357,020	19,812,485
August	21,714,495	19,767,314
September ...	20,413,537	19,349,756
9 months...	$219,975,984	$209,599,799

Control of Oil Trucks

Chief Hendrix Palmer of the Charlotte, N. C., Fire Department, will present to the Charlotte City Council at an early date for adoption, an ordinance designed to route large gasoline transporting trucks around the city, and to limit the quantity of gasoline carried by local dispensers.

Chief Palmer and city officials will also meet with representatives of dry cleaning establishments in an effort to eliminate fire hazards resulting from the use of gasoline and other inflammables.

The North Carolina Association of Fire Chiefs, of which Chief Palmer is President, already has taken a firm stand against the parking of gasoline laden trucks within the corporate limits of cities and towns. The North Carolina League of Municipalities has suggested that cities adopt appropriate ordinances to prevent the trucks from going through the business districts.

In discussing the matter, Chief Palmer said he would obtain, if possible, an ordinance to route the trucks, carrying large quantities of gasoline from Wilmington and other points, around the city "rather than through it."

Likewise, he said, he was interested in regulations for the amount of gasoline to be carried on trucks distributing gasoline within the city exclusively.

Members of the City Council already have expressed interest in the proposals, and the ordinance in all probability will be adopted when presented.

D. G. SPENCER.

By William Paul Babcock

"The Strip Tease"

OF course you all know what that means—I hope.

But I want to give you a new definition of it, that is, new to you.

Really, this expression originated away back in 1916, in salvage operations. If you don't believe me, just ask Capt. Bill Cashman, for he was the originator or the cause and inspiration of its origin.

You see it was this way. As I told you before, Frank Frae and I of the newly organized Nyack Fire Patrol, were in training with Patrol No. 1 in New York, and the handsome young Lieutenant was in charge of a detail sent out to "strip" covers the morning after a fire or two.

Our first job, I recall very clearly, was down in Park Place, which was the district for manufacturers of artificial flowers and foliage. Many thousands of petals, fabricated from various fabrics and all profusely decorated with sprayed water-colors, were spread out on trays resembling window-screens, which were shoved into channels built in long racks, almost the entire length of the loft and about head-height. There they were left to dry.

We found these racks well protected with salvage covers and, the drip having stopped, it was our job to remove these covers. It seemed to us "hicks" an easy task, so we just grabbed one corner of a cover and started to pull! The war-whoop the genial Bill let out was comparable only to what you hear at an Indian medicine show, when the Chief howls "sooold." Then we snapped out of it when the Looey said "XXX!!!??? ———&&&," or someth'n, which, being interpreted in fire-house English could only mean that we were "teasing" him more than we were "stripping" covers, with the great probability that, if our unguided operations were to continue, we might tear great holes in those valuable appurtenances. After the storm subsided he taught us how to *gently lift* the top flap and *roll* it back until the cover fell *softly* to the floor well away from the rack.

So you see, boys, Mae West really had nothing to do with the origin of the term, but merely adapted it to her art.

The moral of which is, "take due notice thereof and govern yourselves accordingly."

O-yes, I almost forgot, I want to thank all "youse guys" for sending in those splendid accounts of your salvage experiences. My goodness, I guess Fred Shepperd will have to put out a larger volume than the October number to hold them all—I hope.

Which reminds me to congratulate Fred et al and thanx for letting me into the "Rogues' Gallery."

SEND IN YOUR NEWS

The Editor of "The Cover," invites Fire Chiefs and salvage company officers to submit items for publication in his column.

You fellows who are on the firing lines can do a service for the entire field if you will give this cooperation to Mr. Babcock.

Why not tell us of some of your experiences with salvage work?

THE EDITOR.

Westchester Officials Talk at Fairfield Plan Meeting

The regular meeting of the Fairfield County Fire Chiefs Emergency Plan was held on the evening of October 27, at the Long Ridge, Conn., Fire House. There were four visitors from the Mid-Hudson-Harlem Fire Chiefs Association, who spoke. Ex-Chief Frank, who is a Director of the Firemen's Home at Poughkeepsie, N. Y., described the home and its management. Chief Henry Drake, Secretary of the association, spoke on the difficulties from the adoption of dial 'phones by the Telephone Company and the trouble arising from the fact that alarms could no longer be transmitted by the telephone operator, as heretofore. Chief Noll, of Poughkeepsie, and Chief Harry Klein, of Hope Farm, N. Y., also spoke.

It was announced that a "Plan" for Litchfield County, Conn., was to be formed. Refreshments were served after the meeting by the local department.

Belknaps Honored

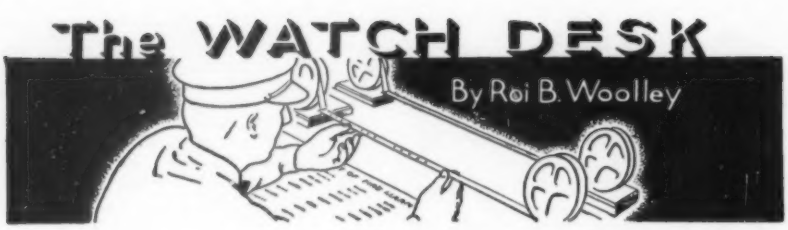
Mr. and Mrs. Harry Belknap, Boston, Mass., were presented with a set of handsomely framed and engraved resolutions from the Russell Fire Club of the Boston Fire Department, expressing appreciation for coffee served to the Boston firemen at large fires during the winter months. President Marcus F. Hulbig, of the Russell Club, made the presentation on September 16, at the Massachusetts State Firemen's Convention in New Bedford.

Arson Gang Active in Maryland

Authorities have announced that a gang of arsonists are active in Maryland. All agencies launched an investigation after Baltimore suffered four serious fires in fifteen days. They declined however to say that any gang set the fires, merely stated that the fires are being investigated.

Investigators are urging the creation of a State Fire Marshal Office and an arson squad for Baltimore city. At the present time thirty-five per cent of the annual fire loss is listed as arson.

OTIS SMITH.



Our inquiring reporter overhauls the firemanic news of the day.

A Quip or Two — From the News

"Girl Gets Help to Save School From Burning" was headline in papers. In our day we'd have formed a bucket brigade and filled the buckets with gasoline!

"When is it permissible for a woman to spit in a man's face"? asks a correspondent of Beatrix Fairfax. Our answer is "When his mustache is afire."

We've Always Wanted To See This

Newscout from the Windy City writes us that an Illinois fireman, answering an alarm, slid down the sliding pole so fast that he ignited some matches in his pocket and got a nasty burn. Charity begins at home and, in this case, so does fire fighting.

Wanted — An 8 Hour Day — N. J.

Holding its first convention, after a recent reorganization, at Atlantic City, the New Jersey State Fire Fighters' Association adopted a platform calling for an eight-hour day, a 48-hour week wherever possible in larger communities and a maximum of a 72-hour week. Organization is said to represent 3,000 firemen in 11 cities.

Beer Pump Takes Toot Outa Whistle

Mayor Andrew Van Riper of Haledon (N. J.) was all burned up when he learned that loss of pep and power in the fire alarm whistle of Haledon Borough was due to fact vol. fire laddies at Firehouse 2 were tapping the compressed air which supplies tooting force for whistle alarms for purpose of operating beer pumps on fire house bar. Firemen at this station have beer license, but, according to Mayor, swiping air from vital alarm system to promote beer distribution "was a cheap piece of work . . . they jeopardized the fire alarm system for their beer barrels." Latest report is that whistle is tooting as of yore.

Our Limerick Hound

An anonymous reader sends us this bit of verse—or worse:

A cute little trick from St. Paul
Wore a "newspaper dress" to a ball.
The dress caught on fire
And burned her entire
Front page, sporting section and all!

Not bad, say we. Who's gonna be next in the limerick competition?

Bored Firemen Build Blazes

Six firemen of the Absecon (N. J.) Vol. F. D. were arrested last month on charge of arson and accused of setting fire to unoccupied buildings, five of which were burned in six weeks. According to state troopers who made arrests, firemen began igniting buildings because things were getting dull in their line and they were getting bored. Those implicated have good reputations and are respected in their community. Old residents of Absecon recollect earlier epedemic of fires which destroyed delapidated structures and was traced to members of the Vol. department.

Kerosene Conquers Fire

No less than four newscouts sent'us this'un. Seems that down in Greenville (Ala.) when a blaze, discovered in nine cotton bales, threatened 1,000 other bales stored in a warehouse, Claude Baisden, Water Works Engineer, called for kerosene and used fluid to extinguish fire in bales as they were removed from the warehouse. Cotton experts explain that water cannot penetrate to smouldering fire inside cotton bale, while kerosene, which will not ignite if its fumes do not mix with oxygen, is effective. Paste this in your scrapbook!

Our Apologies to Lt. Stein, D.C.F.D.

Our apologies to Lieutenant Elmer F. Stein, Engine Co. 16, District of Columbia F.D., for overlooking his news item of months ago. His experience was weird and tragic. Here's what he says:

"I thought that you might be interested in one of the most horrible experiences I think that a fireman ever encountered.

"Leading a hose line into a building at 1426 K Street, this city, I was nearing the second floor landing when a man, with his clothing entirely ablaze, turned the corner and started down the stairs. Having his arms outstretched he blocked the stairway with a wall of fire. So quickly had he come upon me that I could do nothing but snatch at his clothing with my bare hands. Most of the clothes fell away leaving the collar, cuffs and waistband of a shirt still on fire. Private William Ronan of my company, who was following me up the stairs at the time, instantly slipped off his coat and between us we effectively smothered the fire. The victim, Francis X. Laughran, died later as a result of his burns, while all I had was slight burns on the hands. I hate to think what might have happened, however, had the man wrapped those blazing arms around me.

"I don't know whether anyone can have a worse experience, but, believe me, that's as far as I care to go."

News Flashes

Two firemen of H & L 24, N. Y. C., were injured when truck sideswiped elevated pillar en route to an auto fire. . . . 2,400 chickens were burned in fire which destroyed large barn on farm of W. Grossman, Frenchtown (N. J.). . . . Thomas Kemp, 27, negro fireman, is charged with murder of Midd Draughn, 28, engineer of crate and box factory, Mobile (Ala.). Reported that Kemp stunned victim with fire rake, then shoved him screaming, into fire box of boiler in plant. . . . The explosion in the Mulga coal mine which killed 34 men was caused by a match. . . . A cigarette dropped in upholstered furniture caused fire in Brooklyn (N. Y.), which killed four, one a fireman, Joseph McNamara, Eng. Co. 239, N. Y. F. D., who later was buried with honors. . . . Fire thought to have been started by cigarette fatally burned 10 farm youths near Kirkintilloch (Scotland), while they tried to escape through locked door and out of windows too high to reach. . . . In St. Louis, of 78 applicants who thought they knew smoke when they saw it, only five passed exams for smoke inspectors. . . . Philip Zebroff, sentenced last June in Philadelphia to three to six years on an arson charge hanged himself in Holmesburg prison. Shoulda done it sooner! . . . Peter J. Harmon, aged 57, of Eng. Co. 61, N.Y.F.D., died from fractured skull, as result of 20 foot fall down a pole-hole while responding to test call. . . . Fireman Walter Peters, of Eng. Co. 3, New Rochelle (N.Y.) F. D., died as result of injuries sustained when he fell while sliding a rope at the city's drill tower. . . . Busy Fourth Battalion, N.Y.F.D., took 40 persons to safety down 30 foot and shorter ladders when they were trapped in a 2-alarm tenement fire on Allen Street. . . . One hundred twenty-two passengers were saved when Chilean passenger steamer Pudeto burned; crew stayed aboard to fight a losing battle and later escaped. . . . At American Legion convention 'tis said a legionnaire sent in false alarm and when apparatus arrived climbed to seat of H. & L. truck and nearly succeeded in driving off with it. Couldn't a been one of those visiting firemen! . . . Twelve German firemen were killed in explosion of a powder factory at Unterlues, while fighting a fire caused by earlier blast. . . . Baltimore got big thrill, firemen got big workout, at 10-alarm blaze at Garden Amusement Park, that city. . . . The 2-way radio is now working on the fireboat fleet of New York City; Mayor LaGuardia and Commissioner-Chief McElligott ceremoniously ushering it in. . . . Charley Dempsey, Union City (N. J.), left for a vacation. En route on a Lackawana train he wondered whether or not he had disconnected electric iron, got jittery, told conductor who stopped train and threw note to station master who, in turn, telegraphed police in Union City, who, in turn chased to Dempsey's home, only to find all was well.

Note to contributors: If you do not read your news contribution in the next issue of FIRE ENGINEERING don't despair —if it's suitable it will ultimately find its way into print.

Editor, Watch Desk.

WHAT DO YOU KNOW?

The Editor of "The Watch Desk" welcomes contributions from readers of FIRE ENGINEERING that briefly give facts about interesting, odd things that have to do with fires, fire fighting, etc. Address "Editor, Watch Desk."

Boston Has 3-Alarm Storehouse Fire

Three alarms were sounded from Box 5234 in the Allston district of Boston, Mass., on the night of October 13, for a spectacular blaze that caused damage estimated at $100,000 to a paper storehouse of the Thompson and Norris Division of the Hinde & Dauche Paper Company, No. 119 Braintree Street.

The flames had obtained great headway and were breaking through the roof of the two and a half story brick building when the first alarm was sounded at 11:01 p.m. District Chief Joseph W. Shea ordered a second alarm at 11:10 and upon arrival of Deputy Chief John F. McDonough a third alarm was sounded at 11:23.

The storehouse, 200 feet long, 70 feet wide, and 45 feet high, was fully involved and the fire was threatening to spread to the adjoining frame factory of the Thompson-Durkee Company. This structure was wet down and several streams of water were played into the narrow aperture between the two buildings.

Five deck pipes, including Morse wagon guns and Eastman portable deluge sets, were operated besides 14 mobile lines. Chief Samuel J. Pope responded on the third alarm and took command. Other officers on duty were Deputy Chief Thomas H. Downey, Acting District Chief Paul Doherty, and Motor Apparatus Engineer James Ryan.

The storehouse contained 2,000 tons of paper stock. Several firemen suffered minor injuries. A huge crowd was attracted to the scene.

The all out signal was not sounded until 10:28 a.m. on October 14. A detail of firemen with several lines remained at the scene for some time longer, as there was much overhauling to be done. The total amount of hose laid was 10,950 feet of two and a half and three-inch cotton rubber lined hose.

The response of apparatus was as follows: First alarm, Engine Companies Nos. 41, 34, and 29; Ladder Companies Nos. 14 and 11, and Chief of District No. 11; Second alarm, Engine Companies Nos. 51, 37, 33, 10, and 13; Ladder Companies Nos. 26 and 15; Water Tower No. 2; Chief of District No. 8, and Deputy Chief of Division No. 2; third alarm, Engine Companies Nos. 26, 32, 24, 15, 23, and 3, and Chief of Department.

The covering assignments were as follows: Second alarm, Engine Companies Nos. 15 to 33, 19 to 28, 20 to 24, 24 to 37, 26 to 41, 28 to 29, and 32 to 34; Ladder Companies Nos. 3 to 14, 20 to 15, and 30 to 11. Third alarm, Engine Companies Nos. 16 to 42, 21 to 23, 39 to 33, 42 to 41, 50 to 34, and 53 to 37.

Wagons of the Boston Protective Department, two lighting plants, and a fuel truck were also at the scene, also emergency cars of the Boston Consolidated Gas Company and the Boston Edison Company.

HARRY BELKNAP.

Baltimore Has 7-Alarm Fire

A spectacular blaze raged through the two top floors of the Baltimore Gas Light Company, October 22. Workers noticed fire in the fourth floor ceiling soon after the store opened. They used extinguishers, but with no effect. Fire flashed to cardboard and excelsior, and spread with explosive swiftness. A man then ran outside and sent a box alarm.

Eight land companies and one fireboat rolled on the first and took lines to the fourth floor. A truck company

Taking a Line to the Roof on Adjoining Building

rescued two men trapped on a window ledge. The engine crews were soon forced to back down, however, because of the heavy smoke. Six more alarms were pulled, as the fire gained complete possession of the third and fourth floors. These summoned forty-five of Baltimore's ninety-five fire companies. They consisted of twenty-seven pumpers, one hose and rescue, three fireboats, eight aerial trucks, three turret hose wagons, one foam wagon, and two water towers.

A score of lines were taken off the high pressure system, which worked to capacity. The fireboat Cataract also supplied six high pressure lines.

Dense smoke filled the street in front of the building, so that at times the visibility was reduced to a few feet. Because of the substantial construction of the building it held the smoke, preventing firemen from entering. The roof finally collapsed, and lines were advanced to the fire floors.

Size of the fire was blamed on several conditions. The alarm was delayed, while employees tried to fight the fire with extinguishers. The third and fourth floors were filled to the ceilings with Christmas stock, including large quantities of excelsior and cardboard boxes. First alarm companies also found the streets about the building crowded with cars of workers and curiosity seekers.

The building is located at 111 East Lombard Street, and is occupied by the Baltimore Gas Light Company. Officers at the fire included Chief Howard Travers, Deputy Chiefs Clarence Smith and George Otter, and six Battalion Chiefs, including one of the Marine Division. Six firemen and one spectator was treated by ambulance crews.

OTIS SMITH.

2-Way Radio for Charlotte

A two-way radio system has just been placed in operation at headquarters station of the Charlotte Fire Department which enables Chief Hendrix Palmer to broadcast as well as receive short wave messages while traveling in his automobile.

The broadcasting apparatus in the car is called W4XFA and an experimental license has been obtained for the installation of other equipment in the Assistant Chief's car that will respond to the call letters.

Chief Palmer said the system is working satisfactorily and predicted it will prove exceedingly valuable in fighting fires. For instance, he said, when a fire alarm goes off he immediately speeds to the scene of the fire. On the way to the fire he talks back and forth with headquarters and is notified if other alarms come in from other sections of the city. When he reaches the fire he can inform officers at headquarters if assistance is needed or if the situation is under control.

The two-way system was installed by T. C. Wood, Chief Radio Technician, who is in charge of station WPDV at

Heavy Streams Were Used to Fight a Multi-Alarm Fire at Baltimore

the city hall which is used for city and county police, as well as the Fire Department. D. G. SPENCER.

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of October, 1937. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending October 30	Loss in Thousands of Dollars
Royal Oak, Mich.—Chas. Campbell store and apt. building	$ 50
Alliance, Ohio—Plant of King Bee Milling Co., destroyed	50
Edgerton, Mo.—Business property damaged	50
Portland, Ore.—Plants of Blake-David Lumber Co., and Northwest Box Co., destroyed	100
Lewiston, Me.—Several store buildings damaged	50
Patoka, Ill.—C. D. Martin store and warehouse, adj. property	50
Omaha, Neb.—Abandoned bldg. of Stroud Red Wagon Mfg. Co.	50
Zanesville, Ohio—Burley Brothers Pottery Plant destroyed	80
Ephrata, Pa.—William Shimp building destroyed	60
Tulsa, Okla.—Property of Tulsa Cotton Oil Co.	50
Cushing, Okla.—Yards of Long-Bell Lumber Co., adj. property	80
Wiseton, Sask.—Redden's hardware store and Cox's general store	50
Portland, Me.—Whse. of D. Finkelman & Sons damaged	50
San Mateo, Cal.—Gymkhana Club stables destroyed	60
Hughes Springs, Tex.—J. M. Niblett cotton warehouse	200
Wichita Falls, Tex.—Property of Mack Taylor Wholesale Drug Co.	125
Steubenville, Ohio—Imperial Hotel damaged	50
Colonial Park, Pa.—Clubhouse of Colonial Country Club, Jonestown Road	50
Roslyn, N. Y.—Dwelling of Richard S. Cullen destroyed	60
Kane, Pa.—Factory of Holgate Brothers damaged	50
Chicago, Ill.—Plant of the Servicised Products Corp.	150
Ruston, La.—Dubach High school destroyed	75
Brighton, Mass.—Whse. of Hinde & Dauche Paper Co.	80
Fremont, Ohio—Plant of Johnson Ice Co.	50
St. Paul, Minn.—White Bear Yacht Club property, adj. premises	80
Newberry, Mich.—Section of State Insane Asylum, 2 mi. south	80
Visalia, Cal.—Dehydrator plant of W. C. Lovelace 3 mi. south	50
Chicago, Ill.—Bldg. occupied by H. S. Kaiser Co., destroyed	50
Pocomoke City, Md.—Mason Canning Co. warehouse destroyed	50
Slippery Rock, Pa.—North Hall of Slippery College destroyed	400
York, Pa.—International Chain Works destroyed	400
Sherbrooke, Que.—Grand Central Hotel destroyed	60
Louisville, Miss.—Plant of Louisville Compress Co., destroyed	325
Fresno, Cal.—Eight business buildings destroyed	80
Walla Walla, Wash.—Grain elevator and whse., 35 mi. south	90
Tahoe City, Cal.—Post office and adj. business property	80
Halifax, N. S.—Business property in Gottingen Street	80
Moody, Tex.—Palace Theatre and adj. business property	50
Sykesville, Md.—Business property damaged	50
Milford, Pa.—Garage and five automobiles on Pinchot estates	50
South Bend, Ind.—M. J. Gilbert clothing store and other property damaged	125
Pompton Plains, N. J.—Dutch Reform Church destroyed	100
E. Swanzey, N. H.—Factory of C. L. Lane Co., destroyed	50
Sydney, N. S.—Bldg. occupied by C. Roy Mason, adj. property	80
Minot, N. Dak.—Plant of Lignite Products Corp. of America	170
Kearsage, N. Y.—Sunnymeade Hotel damaged	50
Thomasville, Ga.—Dwelling on Inwood plantation owned by J. E. Ladson	60
Fresno, Cal.—Barrett-Hicks hardware store destroyed	90
Ocean City, N. J.—Strand Theatre destroyed	70
Chicago, Ill.—Garfield Park Methodist Church damaged	50
Canenovia, N. Y.—Several business establishments	80

5 Hurt in Apparatus Crash

Five members of Engine Company No. 8 of the Hartford, Conn., Fire Department, narrowly escaped death on October 15 when the fire apparatus, answering an alarm of fire from Box 41, Capitol Avenue and Putnam Street, crashed with a roadster, caromed off the road, snapped off a fire hydrant and overturned into the northwest corner of Pope Park, one of the city's playgrounds.

Driver Daniel G. Landerfin of the hose wagon was taken to Mount Sinai Hospital with a possible fracture of the skull and right shoulder. Firemen Joseph Martin, Edward Lowry, Cornelius Moylan and Michael J. Connors were taken to their homes after treatment by an ambulance doctor from the Municipal Hospital.

It was the first serious accident the Hartford Fire Department has experienced since 1933, when a captain was killed and four firemen injured in a crash at Collins and Sigourney Streets. The driver of the roadster escaped with only a shaking up. The driver of the private car told police that he saw the fire apparatus bearing down upon him, but did not hear the fire siren because he had a radio playing in his car.

Fire Chief Michael T. Keena arrived at the scene shortly after the accident and took charge of the damaged apparatus. The hose wagon, a five-ton Pope, was extensively damaged. When the apparatus struck the hydrant water gushed high into the air and flowed down Putnam Street to flood the north side of Capitol Avenue in front of the Pratt and Whitney aircraft plant.

THOMAS F. MAGNER.

Added Budget for Baltimore

An increase of $423,349 is asked for the 1938 budget of the Baltimore, Md., Fire Department. Part of this would be used for the purchase of ten new pumpers, eight tractors for aerials, and several automobiles.

For the past several years the department has been seeking sufficient funds to retire old equipment. So far they have been only partly successful. The current budget is $3,308,772.50. For 1938 a budget of $3,732,121.50 is sought.

OTIS SMITH.

Donnelly Chief of Lincoln, Neb.

After serving as Acting Chief of Lincoln, Neb., for nine months, Chief Francis W. Donnelly has been named head of the department.

He had asked for demotion from the post of Acting Chief to his former post of Assistant Chief, as he felt he did not want the added responsibility, without the salary that went with the position. His salary has now been fixed at $2,880 or $80 more than his predecessor.

He joined the department in 1912. He became Secretary to the Chief, March, 1917, and was later promoted to Lieutenant. Donnelly was advanced to Captain, October 2, 1917, and Assistant Chief in October, 1922. He has been Acting Chief since December 16, 1936.

Fire Aid for Rural Areas

A suggestion was made by the Mayor of Oshkosh, Wis., that some fire protection should be provided for those living in the rural sections about the city. He advanced this idea at a meeting of the Booster Club.

Also present was a Councilman of Fond du Lac who explained that in that city, the surrounding townships purchased a fire apparatus unit which was housed and manned by the city department. When not needed in the rural areas, this unit also responded to city fires. Attention was also directed to a state law which permits the incorporation of fire districts in rural areas surrounding larger municipalities.

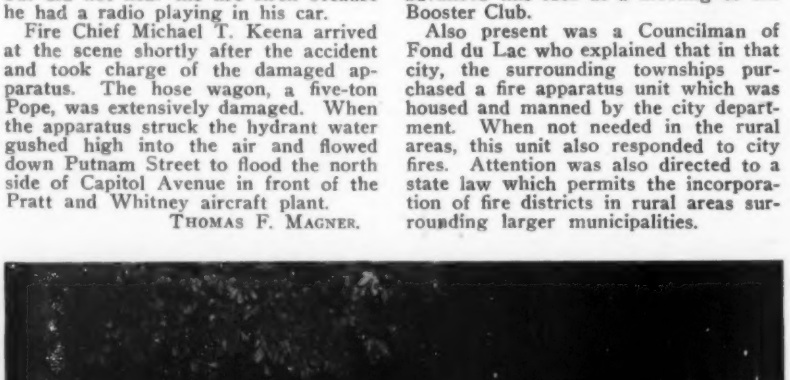


Photo courtesy Hartford Courant

Pope Hose Wagon of Hartford After It Turned Over

Maine Chiefs Elect Randlette

The annual meeting of the State Association, Fire Chiefs of Maine, was held on October 12, in the recently remodeled headquarters of the Pittsfield, Me., Fire Department. Over sixty members attended. The morning session opened

Chief Joseph W. Randlette

with an address of welcome by Judge Anderson, of the Pittsfield Municipal Court. Chief Joseph W. Randlette, of Richmond, responded for the association. Several letters and telegrams were read from members who were unable to be present. An address was given by Mr. Craig, of the Pittsfield Rod and Gun Club. The principal address of the morning was given by State Senator Sanger Cook, who is head of the Maine Central Institute. He spoke on the topic "A Layman's Reaction to Fire Prevention Week." He advised bringing the fire prevention problem to the attention of the public by more intensive educational programs.

Chief Joseph W. Randlette, Richmond, was elected President of the association for the ensuing year. Chief Ray Badger, of Pittsfield, was chosen Vice-President, and Ex-Chief Charles W. Bowker, of South Paris, was re-elected Secretary-Treasurer. This will be his 25th term in this office. The association voted to appoint an assistant to the secretary and Assistant Chief A. G. Balquiere, of Norway, was named to the post.

Luncheon was served in the Lancey House. The afternoon session opened with motion pictures which were shown by R. M. Benson, Rockwood Sprinkler Company. Chief Randlette told of the need for special forest fire equipment in every town. Captain Cassidy, drill master of the Bangor Fire Department, read a paper on "Uniform Training Methods for Firemen." The meeting then adjourned and the members went outside to witness demonstrations of the Akron mist nozzle and the Elkhart mystery nozzle. These tests were arranged by the Eastern Fire Equipment Company, of Portland. A banquet was held in the evening, followed by a round table discussion. The president was authorized to appoint a committee, whose duty it will be to list for the entire state the number of foam generators and the amount of foam powder available for use in an emergency. The question of the association formulating rules and regulations and appointing officials for the various firemen's contests and field days was left to the board of directors to report at a future meeting.

HARRY BELKNAP.

Illinois Firemen Observe 50th Anniversary

The Golden Jubilee Convention of the Illinois Firemen's Association was held at Danville, Ill., October 12 to 14.

Simon Kellerman, 3rd, general attorney for the association, gave a talk on "Legislation for Volunteers' Pensions, Etc."

Claude Bawden, Underwriters' Laboratories, Youngstown, Ohio, spoke on "Magic and Fire."

"How the Fire Department Can Help in Smashing Arson," was explained by Sherman V. Coultas, State Fire Marshal, Springfield.

A demonstration of "Check Testing of Labeled Products," was given by C. M. Jones, Underwriters' Laboratories, Chicago.

A. L. Campbell, Clarendon Hills, Ill., spoke on "Public Relations of the Fire Department."

A number of other talks and committee reports were presented during the convention.

The officers of the association are George Knol, Cicero, President; Elmer W. Wiedler, Mt. Olive, First Vice-President; Roy W. Alsip, Champaign, Secretary; Simon Kellermann, Jr., Edwardsville, Treasurer, and George L. Chain, Bushnell, Historian.

Milwaukee Lowers Losses

According to facts about the Fire Department of Milwaukee, Wis., which is contained in consolidated report of the Common Council, edited by the Municipal Reference Library, the fire losses for 1936 were eighty-three cents per capita, as compared with ninety-five cents for 1935. There were only three fires in the city where the loss exceeded $15,000.

As the result of 432,587 inspections of buildings, 6,787 defects were found and ordered corrected. The two rescue squads of the department responded to 427 special calls. Of the 254 patients, 181 were treated successfully.

FIRE FACTS
BY OTIS SMITH
ICE OFTEN CAUSES HOLES TO FORM IN CHIMNEY WALLS. THIS HAPPENS WHEN RAIN GETS IN THE BRICKS BELOW THE ROOF LINE. THIS RAIN FREEZES AND CRACKS THE BRICKS. AFTER SEVERAL YEARS THERE ARE HOLES THROUGH WHICH SPARKS CAN ESCAPE INTO THE ATTIC.
SPEED TRANSFORMERS AID -- TOWNS HAVING PUBLIC ALARMS. THEY SOUND THE BOX ON THE INSIDE BELL IN A FEW SECONDS, BEFORE THE SLOWER OUTSIDE ALARM CAN COMPLETE THE BOX. THE ENGINE CAN GET AWAY TWO MINUTES SOONER.
1764
FIRE ENGINE
GEORGE WASHINGTON'S FIRE ENGINE ——
THIS "TUB" WAS PRESENTED TO ALEXANDRIA, VA., BY OUR FIRST PRESIDENT. NOW RESTING IN A MUSEUM, IT RECENTLY TOOK PART IN A PARADE. (BALTIMORE, MD.)

The School Goes to the Movies

Children have often wished that they could cut school and go to the movies, but it remained for Medina, N. Y., a village between Niagara Falls and Rochester, to make such a procedure official.

During Fire Prevention Week, children from twenty-six of the schools in and near the village met at city hall and paraded to a local motion picture theatre to witness the showing of "Sounding the Alarm." Besides the special shows for the children, the picture was projected at all the shows that week.

Fire drills were held at all the schools and inspections made of the business properties.

The department of eight paid men is in charge of Chief J. A. Ayrault.

Crowd of School Children Waiting to Enter the Medina Theatre

Brother of Chief Mulcahey Dead

While Ex-Chief James J. Mulcahey, of Yonkers, N. Y., was attending the I. A. F. C. convention at Oklahoma City, he received word of the passing of his brother, Captain Patrick Mulcahey, formerly of the Yonkers Fire Department.

Captain Mulcahey was born in Yonkers in May 10, 1868, and joined the department on August 4, 1902. He had retired on May 3, 1932.

He is survived by his brother, Ex-Chief Mulcahey, a son, three daughters, two sisters and eight grandchildren.

York, Pa., Has $500,000 Fire

One of the most costly fires in York, Pa., for many years broke out on Sunday morning, October 17, and completely destroyed the International Chain and Manufacturing Company plant, with a loss estimated by the General Manager at $500,000.

A box alarm at 1:34 a.m. brought out four companies, including three pumpers, four hose wagons and a ladder truck. Assistant Chief Si Spangler, answering on the first, turned in a general alarm at 1:37. Answering this were the remaining four of the city's eight companies, including three more pumpers, three hose carriers, a chemical wagon and foam truck.

Twenty hose lines from the seven pumps, and several lines from the nearby York Hoover Body Corporation plant were played on the blaze, under the direction of Chief L. Ellis Wagner.

Fifty men working in the plant first saw the blaze and tried to fight it, when an explosion threw flames all around them and made them run for their lives. One employee and five firemen were injured.

The building, of one story brick and steel construction, was ninety feet wide and a city block in length. The thousands of chains, mainly for automobiles, manufactured throughout the summer for sale this winter, were ruined by the heat and tons of water.

The first trucks were ordered home by Chief Wagner at 3:30, and the last turned in with recall at 10:10 o'clock Sunday morning.

R. Schleeter.

Fire Drill at Children's Show

As a prelude to the observance of Fire Prevention Week at Bisbee, Ariz., the manager of a local motion picture, after a conference with Chief Barney Norton and the Chief of Police, staged a fire drill during a children's matinee.

When the community fire siren sounded, most of those inside thought that a real fire had broken out. Police and firemen were on hand to supervise the drill. Theatre ushers, previously informed of what would take place, were on hand to facilitate a smooth movement of the children toward the exit.

On the stage, a fireman explained what the children should do in case a fire broke out in the theatre. The siren blew. It soon became evident that many of the youngsters failed to grasp the significance of the message. Schoolboy patrolmen trained in safety methods, immediately helped to marshal the children towards the exit. Throughout the auditorium could be heard the shouts of the student-patrolmen and the ushers, "Don't rush, but hurry!" Police were on the outside to handle the outpouring crowd. The theatre personnel were near the exit to prevent shoving as the children tried to rush out into the open.

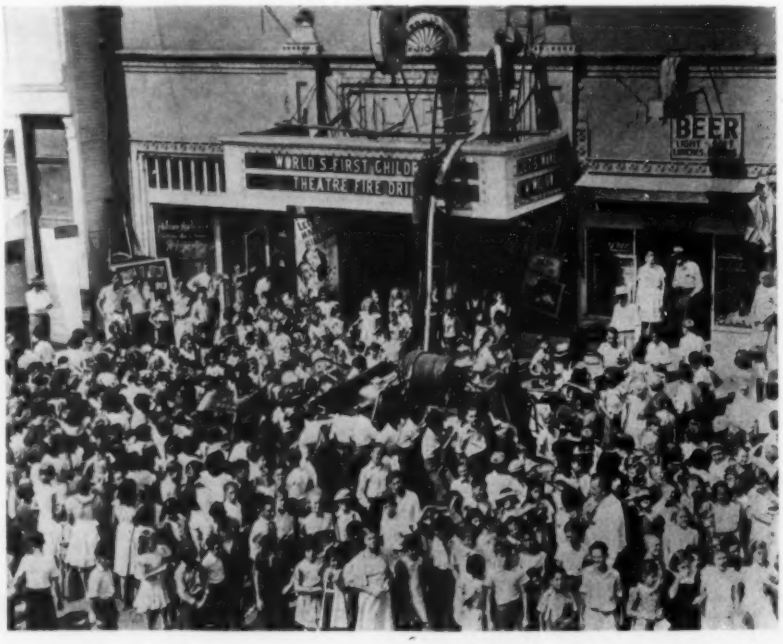
According to the theatre manager, Ted De Grazia, the experiment was a success. Although there was some delay, as children started looking for younger brothers and sisters, all were ushered out with no serious loss of time. Some of the older boys, who were in the balcony and were able to comprehend the speech of the fireman, offered to "knock the block off" any one they saw rushing down the stairs.

It was estimated that over 1,200 children left through the single exit in 3:47 minutes. The theatre manager said that he expects to hold fire drills as a frequent feature of children's matinees.

The local Chamber of Commerce and the schools were wholehearted in their support of the plan.

Pumpers Bought for New York World's Fair

The New York World's Fair Corporation has awarded contract to Ahrens-Fox Fire Engine Company for five pumping engines to equip the fire bri-



Children Gathered in Front of the Theatre at Bisbee, Ariz., After the Fire Drill

Specify

FEDERAL C-5 COASTER SIREN

WITH FLASHING BEAM OF LIGHT

Get the best siren money can buy for that new apparatus. It will pay you greater dividends in safety and faster runs. The only way to get a FEDERAL C-5 on new apparatus is to *specify it* when ordering new apparatus. The streamline C-5 COASTER SIREN sounds a giant roar for a full 3 minutes after current is shut off—*that saves battery.* Rugged and dependable. Try one on your present apparatus for 30 days. No obligation.

Ask about New Bulletin

FEDERAL ELECTRIC CO.

POWERFUL

SMASH

OF TONE POWER

Clears the Way for Blocks Ahead

Specify

FEDERAL "77" DOUBLETONE LONG ROLL SIREN

Built Chockful of Action for its Size. Rugged in Construction to withstand abuse on busy piece of equipment.

1. Newest innovation a two-tone blast.
2. Large red flashing light.
3. Long rolling action after current is cut off more than two minutes—that saves your battery.
4. Electric Brake—Touch of button stops roar instantly.
5. Economical, Streamlined, Precision Built. Absolutely a new siren.

Write for Trial Offer NOW

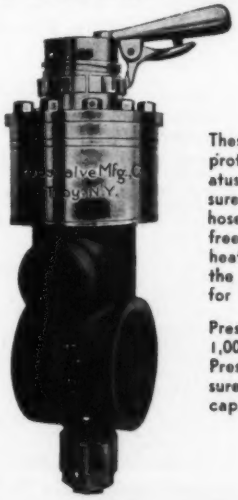
SPECIFICATIONS

Model	"77"
Finish	Chrome
Voltage	6 or 12
Dimensions	15½" long x 8¼" high
Net Weight	22¾ lbs.
Brackets	Pedestal or Roof

ASK FOR BULLETIN NO. 56

8702 S. State St., Chicago

RELIEF VALVES THAT PROTECT MEN and LINES!



The CHOICE OF MANY LEADING FIRE CHIEFS!

These improved Ross Relief Valves protect your men, lines and apparatus against sudden increase in pressure due to starting pumps, closing hose nozzles, etc.! And they can't freeze because they're encased in a heating jacket connected either to the exhaust or cooling system! Ideal for old or new pumpers!

Pressure range to 300 lbs. Capacity 1,000 gallons per minute! Also high Pressure Valves up to 600 lbs. pressure, of 1,400 gallons per minute capacity!

Full details gladly sent on request.

ROSS

RELIEF VALVES

ROSS VALVE MANUFACTURING CO.

TROY, NEW YORK

The BEST SUIT MADE!

GLOBE

FIREMEN'S

SUITS

Warm, roomy, good-looking and durable. Coats have a wide chest protector flap which keeps water out and warmth in. They are lined with either wool or light weight fabric and interlined with waterproof material. Pockets have patent stays to prevent sagging or tearing. Sleeves have warm wristers. Suits come in Black, Brown or White at same prices.

COATS $10.00

No. 240

40", $10.50 45", $11.00

50", $11.50 55", $12.00

PANTS $7.50

No. 270

To match coat. Waterproof, warm with lock snap, quick hitch.

GLOBE MFG. CO.

PITTSFIELD, N. H.

BARTON FIRE PUMPS

Greater ECONOMY *Better* PERFORMANCE

Barton Pumps have revolutionized fire fighting. They have made it possible for small towns and villages to have first-class pumping apparatus—pumpers equal in speed, performance and dependability to anything found in the large cities. ***And at a price practically any community can afford.***

First, the Barton Fire Pump itself is not expensive. By advanced engineering we have accomplished wonders at low cost.

Second, a Barton Pump requires no special, high-priced fire truck to give you all the water and all the pressure you want. You can select any low-cost, standard commercial chassis, and have a real job that your whole community will be proud to own. With our unique front-mounting, a Barton Pump can be attached to your truck in a few hours' time—not a single chassis change required. ***You save hundreds of dollars right there.***

WRITE FOR COMPLETE INFORMATION

Mr. Chief, investigate the Barton ***first.*** Write us for FREE Bulletin 75, which gives the whole story on Barton Fire Pumps in various sizes to meet every need and pocketbook.

AMERICAN-MARSH PUMPS, INC.
Centrifugal, Turbine, Steam, and Power Pumps
BATTLE CREEK . . . . MICHIGAN

Highly Endorsed by Fire Chiefs Everywhere!

Chief Henry of Lexington, Ky., writes:
"The 'Fire Chief's Handbook' is the work of one of vast experience. Every fireman should have a copy for study and reference."

Chief Gambrell of Dallas, Texas, writes:
"It is very instructive and helpful. We find this book very convenient to refer to in our school work."

THE FIRE CHIEF'S HANDBOOK

By FRED SHEPPERD

In Collaboration with the EDUCATIONAL COMMITTEE ***of the*** INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

THERE have been books on fire-fighting, but never anything so complete and authoritative as the "Fire Chief's Handbook." This book, a gold-mine of practical, helpful data, gives a reliable, up-to-the-minute answer to almost every question that might come up in modern fire-fighting practice.

For progressive fire chiefs, interested in up-to-date fire fighting methods, the "Fire Chief's Handbook" will be a mighty valuable reference guide. It gives to ambitious fire department officers and men, in plain, understandable form, information that should prove extremely helpful in preparing for promotional examinations. In fact, it is a book every fighter needs and ought to have. *The Edition is Limited—Better Order Your Copy Today.*

Here are some of the subjects covered:

FIRE DEPARTMENT TOOLS AND EQUIPMENT
MOTOR FIRE APPARATUS PUMPS
FIRE EXTINGUISHERS AND THEIR USE
FIRE STREAMS
FIRE-FIGHTING METHODS
FIRE STATION DESIGN
TRAINING OF FIREMEN
SALVAGE OPERATIONS
BUILDING INSPECTION
VENTILATION AT FIRES
CARE OF FIRE HOSE
CHEMISTRY OF FIRE
HEAT AND ITS ACTION
DRILL TOWERS
DRILLS AND EVOLUTIONS
FORCIBLE ENTRY
EXPOSURES
STANDPIPE WORK AT FIRES
—and Many Other Things

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street, New York City

$4 *per copy postpaid*

If the book isn't what you expected, return it within 5 days and your money will gladly be refunded.

gade being organized by Chief Thomas F. Dougherty (Retired Assistant Chief F. D., N. Y.) for the protection of the New York World's Fair, now rapidly taking shape in Flushing Meadow Park, Queens Borough, New York City.

Under the terms of the agreement between the World's Fair Corporation and the City of New York, the fire brigade will consist of five companies organized as a battalion of the New York City Fire Department. These companies are to be housed in three fire stations, one of them a permanent building costing $80,000, which will be turned over to the New York Fire Department after the Fair closes in 1940.

The first two pieces of apparatus covered by the contract with Ahrens-Fox will be delivered in about two months and will be immediately placed in service in the Fire Headquarters building, which is now nearing completion. This apparatus will protect the fair during the construction period, and will consist of 1,000-gallon twin-triple piston pumpers, similar to the twenty now being built for the New York Fire Department by Ahrens-Fox.

The World's Fair Fire Brigade will be manned by officers and men detailed by the New York Fire Department, operating under the three-platoon system, and including three Chiefs of Battalion, five Captains, ten Lieutenants, and about 110 firemen.

Correspondence

Mr. Brodey Is Correct

To the Editor:

I wish to respectfully call to your attention several errors in Chemistry Questions and Answers in the August issue of FIRE ENGINEERING and also errors in the September issue.

In the August issue, in the Promotion Study Course, under completion statement question 26, the question reads, "Hydrocyanic acid gas may be formed," etc. Do you mean "Hydrochloric acid may be formed—."?

In the September issue on page 454, in Questions and Answers, in Answer 3 you state that Carbon Disulphide is volatile and inflammable. It forms an explosive mixture with air. It is heavier than air and collects in pockets. It is not poisonous, however, to human beings. It is with the last sentence that I do not agree. According to Bureau of Mines Technical Paper 248, CS_2 is listed as an asphyxiant, also they state that:

"33,000 parts per million are impossible to breathe for several minutes, 500 to 1,000 parts per million is toxic to man in 30 minutes."

Thompson in "Occupational Diseases, N. Y.," page 724, states that it is four times more toxic than carbon monoxide.

Merck & Co. state that local anesthesia and paralysis of arms follow exposure of hands to vapors. Exposure to very small quantity will cause blindness. Further exposure may be fatal.

Alice Hamilton, M.D., in her "Industrial Toxicology," lists many fatalities from exposure to CS_2.

Also in Answer 3, you state that HCN has little or no fire hazard. Nuckolls, Matson and Wright, of Underwriters' Laboratories, state that it is explosive in from 5.6 per cent to 40.0 per cent admixture with air. As HCN gas is usually used in from 1 to 5 per cent for fumigation, it will quite obviously not present any fire hazard in fumingation as 5 per cent is below the lower limit of flammability. Nevertheless HCN has a definite fire hazard, which must be taken into consideration when cylinders of 60 or 100 per cent HCN gas are handled.

Yours truly,
MILTON BRODEY,
Far Rockaway, N. Y.

* * *

In Defense of Sudbury

To the Editor:

Might I call your attention to an article in the August copy of FIRE ENGINEERING, on page 411, signed by John Karl Lee.

I have been a subscriber to this magazine for many years and I feel, as does my predecessor Chief Joseph Fowler, that this article should never have been printed, as it is untrue.

In the first place might I inform you, that, this is not an aerial ladder, but just an ordinary city service truck and as to the clearance of our doors, the width of this truck is a little better than six feet, while the width of the doors are eleven feet two inches. Referring to where it states, "men had to rush to the basement, to prop up the floor, so that the ladders would not fall through," I wish to inform you that, the construction of this floor is of solid steel girders reinforced with concrete and that the said floor would stand another five trucks without any sagging. Your article has reference to the building being close to the Street and if a car was parked you could not get out, we are set back fifteen feet from a seventy-foot street.

It would appear by this article that you take us for a "hick town," but might I inform you that we are a population of twenty-nine thousand, situated just one mile from the home of the International Nickel Company, Limited, right in the heart of the nickel district.

It is the belief of my predecessor, Chief Joseph Fowler, and also myself, that this article should be explained in a truthful manner in the next issue.

Yours truly,
W. L. ANDREWS.
Fire Chief, Sudbury, Ont.

* * *

Orchids for Greenock

To the Editor:

The interesting article entitled "What Is a Fire Fan?" by Robert Greenock in the October Fire Engineering must have brought up a host of interesting recollections to both firemen and fire fans.

When I was small I was an engine house pest in Washington, D. C., and can recall many of the initiation tests by which firemen tried out the young "fire fans," just as described by Mr. Greenock. Some companies would go so far as to build smudge fires in the basement to see how much smoke the youngsters could take and the fun was seldom ended by having their protege successfully pass the test. Other young fire fans were required to run head on into a wall wearing a fire hat. I can remember being engaged in a company water battle when the Captain walked in. Another time I was saved from an "operation," to be performed by the rescue squad, because the bell hit at the right moment. What a razzing they got from a safe distance when they returned.

There is probably no city having a more loyal group of fire fans or "sparks" as they are called here, than Boston. In addition to the famous Box 52 Club, there are hundreds of one company boosters, whose devotion is chiefly to their neighborhood unit. In the past a number of fine young business men have made their homes at the fire stations. When some of them became married they were greatly missed.

One of the stories the fireman like to tell on the sparks is the following: A group of sparks dressed in regulation fire hats and coats were watching a smoky fire. A Chief seeing them thought that they were idle firemen and ordered them to run a line. The line was taken inside and promptly abandoned, its crew slipping out of sight.

Probably more typical of the loyalty of the sparks was an occurrence at a three-alarm fire. A falling wall sent an entire engine company crew to the hospital. The sparks of that company immediately retrieved the line and the company officially remained in service all night without any questions being asked.

The loyal fire fans are certainly worth the attention that you have given them.

Very truly yours,
WARREN Y. KIMBALL.

Currier and Ives Prints

Two Currier and Ives prints in color, one "The Life of a Fireman," and the other, "Rushing to the Conflict," both fire fighting scenes, are offered for sale. If interested, write to Mabel Sydney Fraser, 1024 Front Street, Georgetown, S. C.

Fleming Talks to Sound Beach Fire Department

The Sound Beach Fire Department, Old Greenwich, Conn., held its annual dinner at Rich's, on Boston Post Road, on Saturday evening, October 20, with a number of invited guests present. The dinner was preceded by an inspection and review by Chief Gisborne and the visiting officials in front of Fire Headquarters.

An address by T. Alfred Fleming, Supervisor of the Conservation Department, National Board of Fire Underwriters, was the feature of the evening. Mr. Fleming spoke on the hazards of gases and oils. Another interesting feature was a lantern slide talk by Alton Blackington, Boston, Mass.

Wants Routes for Gasoline Trucks

Upon the recommendations of Chief Hendrix Palmer, Charlotte, N. C., City Manager J. B. Marshall and City Attorney Basil B. Boyd were instructed by the Council to arrange routes for gasoline transportation trucks that would carry them away from the business district.

Chief Palmer had explained the hazard the trucks create and suggested that they be routed around the city, if possible, rather than through it.

Mr. Marshall explained that he was attempting to get a model ordinance regulating local gasoline distributing trucks, as well as those from out of town.

Chief Palmer for some time has advocated the routing of the gasoline trucks that pass through Charlotte to other destinations, away from the business area. He also has expressed opposition to empty trucks being parked on the streets, contending they were perhaps more dangerous than those laden with gasoline. D. G. SPENCER.

BOY SCOUTS CAN BE OF ASSISTANCE TO VOLUNTEER FIREMEN AND COMMUNITY

Volunteer Firemen of Aspers, Pa., Sponsor Formation of Scout Patrols in Towns in North Adams District

By O. H. Benson
National Director, Rural Scouting Service

THERE are thousands of volunteer fire companies in the United States that have not only developed, through training and cooperative effort, great skill in the fighting of town, village and countryside fires, but they are rapidly developing educational programs in fire prevention, first aid, and in the training of youth in important things related to first aid, community services of all kinds, as well as fire fighting.

Some time ago the writer had the opportunity to respond to an invitation from a group of men representing the Volunteer Fire Company of Aspers, Pa. They had invited a group of boys of their immediate neighborhood into the fire house. These boys wanted Scouting and a fire company offered to sponsor Scouting in the community. As a result, a District Tribe of Lone Scouts has been started. It is to be sponsored by the volunteer fire company.

The plan being developed by this fire company is to sponsor the Tribe of Lone Scouts known as the "North Adams District Tribe." The Tribe will be made up of community patrols of each town in the North Adams District. One patrol already has been perfected in Idaville, known as "Possum Creek Patrol." The second one is being organized at Aspers, and they are now proceeding to organize patrols in Centerville, Guernsey, Bendersville, Gardners and Arendtsville.

When the organization is completed, this volunteer fire company will have organized patrols in each town in the district over which the fire company offers its services. This district includes every farm and cross road location.

In Adams County, Pa., there are 22 volunteer fire companies, representing 22 towns and village. These villages and towns range from 150 to 4,500 in population.

It is suggested that eventually this plan be undertaken by the 22 fire companies of Adams County.

Fire companies, like the Grange, are interested in every phase of community well-being, and they use fire company objectives and program to teach fire prevention and fire fighting as the single program to draw all people together on a common interest basis. Through this the social, educational, spiritual and recreational life of the community is fostered and promoted.

Rural Scouting has for a number of years cooperated with the Agricultural Committee of the Fire Wastes Council, of which I. D. Goss, Chicago, Ill., is Chairman.

The Aspers Fire Company is putting on a demonstration and illustration of what every volunteer fire company of U. S. A. should and can do for their boys. It is recommended that all of our Boy Scout Councils, Scout Executives and volunteers make contact with the volunteer fire companies and their officials with a plan of having at least one fire company in the Area Council sponsor a community Patrol, Tribe or Troop, and start on the basis of the Aspers, Pa., Program. This fire company unit can serve as a demonstration, in order to show other communities how to give this fine service to boys and communities and at the same time give their volunteer fire company the help of a junior group.

Most men organizations have organized away from their boys and leave the sons of the members as orphans, or free to drift into membership of evening and nightly gangs of destruction.

What Scouts Can Do to Help a Volunteer Fire Company

1. Help to Parents and Home—

(a) Gives boys a worthy program of service and character building, sponsored by and related to the organization to which father or parents belong.
(b) Gives boys a definite program with definite objectives to work with during their free time.
(c) Gives to boys in groups a relationship to fine men and leadership of fine men in both Scouting and fire companies' programs of service.

2. Fire Prevention—

(a) It will make possible getting the active help of all boys in preventing of fires. The boys will pass it on to homes, schools and play-hour groups.
(b) They will assist in helping to remove all fire hazards on an organized program basis.
(c) They can conduct campaigns, demonstrations and exhibits to educate the public in fire prevention. This can be presented at County and State Fairs, schools, group meetings and community gatherings.
(d) They can help other volunteer fire companies to organize Scout groups and help to train them.

3. What They Can Do at Fires—

As Patrols, work under leader on details, such as:
1. Keep curious crowd back.
2. Do First Aid Work.
3. Run errands.
4. Run a water bucket relay to furnish water to men fighters.
5. Assist men in fire fighting, one boy for each man.
6. Handle phone service. Send for doctor, ambulance, surgeon and other specialized helpers.
7. Help to furnish fire fighting hand equipment, such as net, wet blankets, brooms, shovels, pails, forks, rakes, and operate the small fire fighting equipment.
8. Develop and operate a small home-made fire company truck to be used on small jobs, such as grass, hay, brush and woodlot fires where large equipment is not needed.
9. Run coffee and hot lunch service for fire fighters during a long siege fire.
10. Serve as guards, watchers and messengers at fires.
11. Help fire company to make surveys or investigations of fire hazard conditions, such as checking up chimneys of homes every fall, inspecting basements, barns, dead grass areas, timbers, railroad grass and brush hazards, then assist owners to correct conditions before fires break out.

Reconstruction Work After Fire

(a) The programs of reconstruction, clean up, removal of rubbish will furnish many opportunities for these volunteer fire company Scouts to render service of value.

(b) To actually help poor families who have suffered loss by fire to work in their clean-up and reconstruction program. This will be a fine "good turn" and "good neighbor" training for boys.

This program will challenge every volunteer fire company of America where its members desire to help boys and where a community is alive to its responsibilities in helping youth to train for a fine service and good citizenship.

Appoint a committee of three or five men to start this program with your home volunteer fire company.

If you do not know the address of your local Boy Scout Council, write Boy Scouts of America, Rural Service, 2 Park Avenue, New York City, for further suggestions and details on how to start Scouting under the auspices of your volunteer fire company.

Chief Gutheim Injured

Chief Herman Gutheim, Cambridge, Mass., Fire Department, is recuperating from injuries received when he fell from the roof of a shed, while directing his men at a recent fire in Cambridge. He escaped with a broken toe and a severe shaking up, although at first it was feared that several ribs were broken. H. B.

Oil Starts 4-Alarm Fire

Baltimore's third serious blaze in two weeks badly damaged a two-story plant at Park Avenue and Preston Street. Shortly after noon a tank of oil exploded, forcing twenty-four workers to flee the building.

The oil-fed flames swept through the building and out through the roof. Four additional alarms were pulled in rapid succession. A total of twenty-two companies responded consisting of fifteen engines, five trucks, one hose, and one chemical. As the explosion had cracked two of the walls, firemen were ordered to keep at a distance. One fireman was injured. The fire was under control in about an hour.

OTIS SMITH.

PRESERVED AGAINST MILDEW

Ready FOR THE NEXT FIRE

■ Hose truck storage is recognized as a dangerous mildew hazard to moist fire hose and strict precautions must be taken to preserve every inch of the hose against deterioration from this source.

The best answer to that problem is to use Republic Provar Processed Fire Hose. Tests prove that this hose shows no sign of rot, loss of strength or discoloration when saturated with water and exposed for long periods to warm, moist atmosphere. Under ordinary care, this hose will give its full life's service.

Specify Republic Fire Hose not only for its protection against mildew, but also because its strength, flexibility, ease of handling and non-warping and non-stretching qualities make it the most economical hose you can buy.

REPUBLIC RUBBER

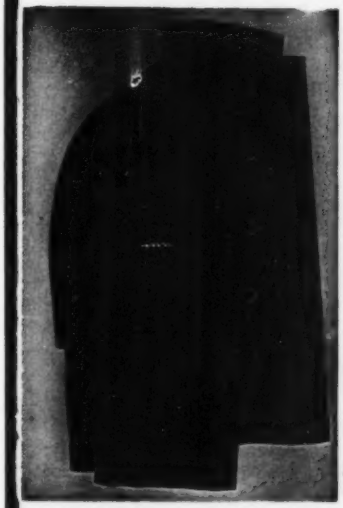
Division OF LEE RUBBER AND TIRE CORPORATION
YOUNGSTOWN, OHIO

Manufacturers of HOSE
BELTING • PACKING
MOLDED PRODUCTS

ORDER REPUBLIC RUBBER PRODUCTS FROM YOUR DISTRIBUTOR

MIDWESTERN FIREMEN'S COATS

Are the World's Finest!



100% Waterproof, Durable and Flexible, made of VANITEX, a special Acid-Proof, Soft, Pliable material, manufactured exclusively for MIDWESTERN. This is the only firemen's coat equipped with the Famous SAFETY SNAP that can be instantly fastened or unfastened with one hand, and will not catch on clothing. See one of these superior coats before buying any other. You'll pick MIDWESTERN!

BEWARE OF IMITATIONS

Look for the double eagle label on the coat you buy.

Write for our Free Illustrated Catalog showing complete line of our rubber and canvas garments.

Satisfaction Guaranteed.

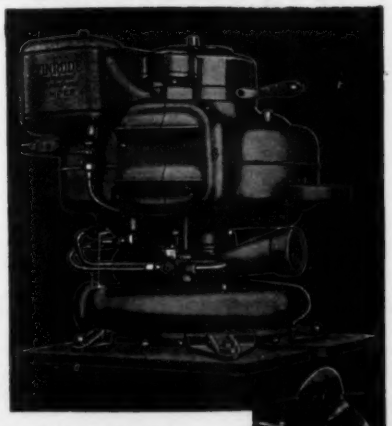
U. S. Pat. No 1944475 — *Canadian Pat. No.* 345601

Midwestern Manufacturing Company
MACKINAW, ILLINOIS
Manufacturers of a Complete Line of Quality Firemen's Clothing

UP TO **154** Gals. per Min.

UP TO **150** Lbs. Pressure

High Capacity with High Pressure



FIRE FIGHTING

For forest fires, brush fires, drainage, booster, etc. Saves costlier equipment. Write today for complete performance tables and specifications on this newest type, smooth running, four cylinder Evinrude Fire Fighter.
Develops 9.2 H.P. at 4000 R.P.M. Latest, modern, hooded power type motor. Sand and other foreign substances handled without wear by simple, non-friction, centrifugal pump of exclusive Evinrude design. Write EVINRUDE, 4587 N. 27th St., Milwaukee, Wis.

EVINRUDE HIGH PRESSURE PUMPER

FIFTY YEARS! is quite a time

Yet Quaker has protected cities, towns and villages with their fire hose for even a longer period of time.

It pays to use dependable Fire Hose.

On your next order be sure to specify—QUAKER.

QUAKER CITY RUBBER COMPANY

Serving the Public for over 50 years

PHILADELPHIA . CHICAGO . NEW YORK . SAN FRANCISCO

Hydrolator

The HYDROLATOR is a device that will automatically permit the escape of water resulting from leaky stand pipe valves.

To Prevent Rot Keep Fire Hose Dry

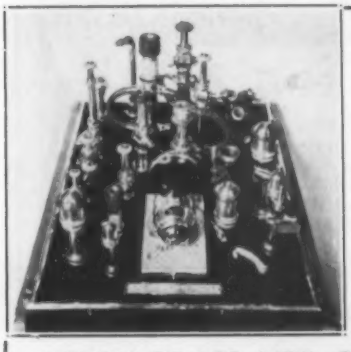
APOLLO MAGNETO CORPORATION, Kingston, N. Y.
Sole Manufacturers

20 TONS AT IMPACT INTO THE NET IS EASILY WITHSTOOD BY ATLAS LIFE NETS

Strongest, most improved life net on the market. Made of best materials—last indefinitely. There's no danger or strain to the men, because of the new patented Dual Shock Absorbers. Used and endorsed by leading fire departments, throughout the country. Your favorite dealer sells them. Send for full details and prices.

ALSO — the famous ATLAS Ladder Belts ● *AND — Drill Tower Training Nets*

ATLAS FIRE EQUIPMENT COMPANY
22 WARREN STREET NEW YORK, N. Y.

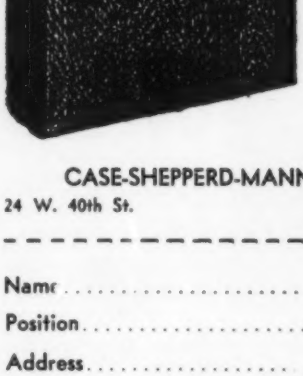


Display board mounted with a few of the more popular items of our large complete line.

Write for catalog. "When you look at a price look at the name that goes with it."

AKRON BRASS MFG. COMPANY, Inc.
WOOSTER, OHIO

KEEP YOUR COPIES of FIRE ENGINEERING *in this handy* BINDER



EVERY issue, as you know, is packed full of interesting and authoritative data, ideas, news, etc., that you like to keep handy for ready reference. Why not keep them all together in a binder? You'll find this special one a great convenience. The cost is only $1.75 and many of our subscribers are already using them. What about you?

Address
Book Department

CASE-SHEPPERD-MANN PUB. CORP.
24 W. 40th St. New York, N. Y.

Name .....
Position .....
Address .....

I. A. F. C. Moves Ahead

(*Continued from page 607*)

plus oil. The oil companies have their water mains and supply, with connections on each lease.

"After cooling off all of the metal and the ground around the well and making sure that no sparks or embers were left that would re-ignite after the well was shot out, it was time to place the shot and put out the well fire.

"This shot of nitro-gelatine is prepared by an expert whose business is to shoot out oil wells. It usually is packed in a barrel made of asbestos and insulated from the heat. Handles are attached so that two men can carry it up and place it up to the side of the hole, just a little above the top of the casing.

"These men must be protected by asbestos suits and a water curtain. A continuous deluge of water is maintained over the surrounding ground and steel so as to keep them cool.

"All fires in that area are extinguished as far as a mile before the shot is fired. Also, everyone is moved back to a safe distance and the shot fired electrically.

"What actually happens is that the explosion of the shot breaks the flow of oil and gas sufficiently for the flame above it to burn out before the flow catches up with it again. The water lines are anchored in place while the shot is being exploded."

Chief Goff also described the methods of controlling a wild well, and also the operation on low pressure oil well fires.

(*To be continued*)

* * *

Convention Notes

The work of Chief George B. Goff as host to the Convention of the International Association of Fire Chiefs was outstanding. Not only in providing transportation at all times for the members, but in having available bands or orchestras on hand to enliven the proceedings as well as the recreation at the Convention, he set a precedent which will be hard for other host cities to follow. The unusually efficient management of the recreational features of the Convention was most marked.

*

At the Civic Banquet, on Thursday night, Mr. and Mrs. George Goff, were presented with a silver service, the gift of the membership of the Association. It was a splendid token of appreciation of the fine work the Chief and his wife did in providing for the comfort and entertainment of their visitors.

*

Three luncheon parties were provided by sectional and other groups at the Convention. The members of Eastern Association of Fire Chiefs, known as the "Eastern Regulars" give a luncheon at which about 150 were present. The luncheon was in honor of Chief Bob Bogan, President. The New England Fire Chiefs Association also had a banquet of like size, at which Chief Bogan and other officers of the Association were the guests of honor. On Monday evening the Louisiana State Firemen's Association gave a testimonial dinner to Chief Robert A. Bogan at which approximately 300 guests were on hand. To give the guests a truly southern treat, Louisiana foods were brought up to Oklahoma City and Louisiana chefs were on hand to prepare them. It was a mighty novel and enjoyable affair.

*

One of the high spots in hospitality at the Convention was the Club Rendezvous, established and maintained during the Convention by The Gamewell Company. Here refreshments both liquid and solid were served to all who came. President V. C. Stanley, of the Gamewell Company, proved a genial host.

*

Though the tour of the oil field by delegates and guests at the Convention was highly interesting, the high spot of this feature of the entertainment program was the extinguishing of the oil pit and the gas well fires at the State fair grounds. Few chiefs, outside of those in oil producing districts, had any conception of the tremendous heat given off and power displayed by a wild gas well. The snuffing out of this spectacular fire by heavy charge of nitro-gelatine was a fitting climax to the afternoon demonstration.

*

Chief W. P. Cooper of the Richmond, California, Fire Department was presented the Louis B. Mayer Trophy for the third time and thus wins permanent possession of it. His department won the cup in 1928 and 1929, in the classification of cities of from 20 to 100 thousand population. Because of his winning it two times in succession and in view of the fact that the Fire Prevention contest is not to be continued, by unanimous vote of the Association the permanent possession of the cup was granted to him, in view of the fact that his department was the only one to have won it two years.

* * *

Exhibits

The Exhibits totalled in number well above those at any Convention of the Association for the past seven years. The amount of space, too, was nearly double that any of the preceding four years.

Credit for this fine turnout is due to the newly elected Second Vice President, Chief Ray Tiller, of Waterloo, Iowa, who was Chairman of the Exhibits for the Convention.

Those taking part in the display of fire apparatus and equipment follow:

American-LaFrance Foamite, Inc., Elmira, N. Y.
American District Telegraph Co., New York City.
Akron Brass Mfg. Co., Akron, Ohio.
Atlas Fire Equipment Co., New York City.
American Automatic Electric Sales Co., Chicago, Ill.
Acme Protection Equipment Co., Pittsburgh, Pa.
American-Marsh Pumps, Inc., Battle Creek, Mich.
American Fire Hose Co., Passaic, N. J.
Bi-Lateral Fire Hose Co., Chicago, Ill.
Buckeye Iron & Brass Co., Dayton, Ohio.
C. G. Braxmar Co., New York City.
Bussman Mfg. Co., St. Louis, Mo.
Cal-Cite Processing, Inc., Oklahoma City, Okla.
Cory-Patterson Mfg. Co., Greenfield, Ohio.
Charlottesville Woolen Mills, Charlottesville, Va.
Dayton Fire Equipment Co., Dayton, Ohio.
Davis Brothers Uniform Co., Oklahoma City, Okla.
Electric Controller Corp., Chicago, Ill.
E. & J. Manufacturing Co., Glendale, Cal.
Elkhart Brass Mfg. Co., Elkhart, Ind.
Fire Protection, Cincinnati, Ohio.
Fulton Bag & Cotton Mills, Atlanta, Ga.
Fire Engineering, New York City.
The Gamewell Co., Newton, Mass.
Homelite Corporation, Port Chester, N. Y.
Kellam Mfg. Co., Atlanta, Ga.
Walter Kidde & Co., Bloomfield, N. J.
Mine Safety Appliances Co., Pittsburgh, Pa.
Morning Pride Mfg. Co., Dayton, Ohio.
Midwestern Mfg. Co., Mackinaw, Ill.
Mars Light Company, Chicago, Ill.
Mack Trucks, Inc., New York City.
Opie Sponge Co., Kansas City, Mo.
Oxygen Equipment & Service Co., Chicago, Ill.
Peter Pirsch & Sons Co., Kenosha, Wis.
Pyrene Mfg. Co., Newark, N. J.
Rockwood Sprinkler Co., Worcester, Mass.
Safety Engineering, New York City.
The Seagrave Corp., Columbus, Ohio.

Fire Marshal for Nassau County

Nassau County, the most rapidly growing county in New York state is to have a Fire Marshal. In accordance with the provisions of a county charter which was recently adopted, each of the departments has been advised to elect delegates to the nine battalion districts set up in the charter. Each of these districts will then meet and elect Commissioners to the board, and this board will work with a Fire Marshal and his staff, which will be established.

At a meeting of the Nassau County Firemen's Association at which Fire Marshal Thomas P. Brophy of the New York Fire Department gave a talk, he said:

"The importance of correct investigation of fires and correct indexing cannot be exaggerated."

Seagrave Centrifugal Pumper, Built for Austin, Texas, and Displayed in the Exhibit of the Seagrave Corporation

CLASSIFIED ADVERTISING

Bids Wanted, For Sale and Help Wanted, $4 per inch. Position Wanted, $2.00 per inch.

Wanted

FIRE HOSE AGENTS WANTED: A leading manufacturer of cotton, rubber-lined Fire Hose is looking for agents experienced in selling Municipal Fire Departments in important open territories. Address Box No. 15, c/o FIRE ENGINEERING, 24 W. 40th Street, New York, with full information as to experience, qualifications, and references.

CONVENTION DATES

Nov. 24—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting Turn-of-River, Conn. Secretary, Lieut. John Moehring, Toms Road, Stamford, Conn.

Dec. 22—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Bethel, Conn. Secretary, Lieut. John Moehring, Toms Road, Stamford, Conn.

Jan. 26, 1938—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Stamford, Conn. Secretary, Lieut. John Moehring, Toms Road, Stamford, Conn.

Manufacturers' Announcements

New Siren by Federal

The Federal Electric Company, of Chicago, recently announced a new siren, their Federal Super X siren, which is a combination warning siren and light, and which projects sound and light directly forward. It is built with a waterproof housing. The manufacturers state the following advantages of the new siren: Weatherproof, will not freeze; shows clearly the pathway of oncoming emergency vehicle; gives greater safety to drivers of emergency vehicle; motorists in closed cars can readily see the approaching apparatus; saves twice as much time because they clear the way faster and guarantee quicker trips; low current consumption; quick action—from zero to 6,000 r.p.m. in two seconds.

* * *

Drain Lug Hose Coupling

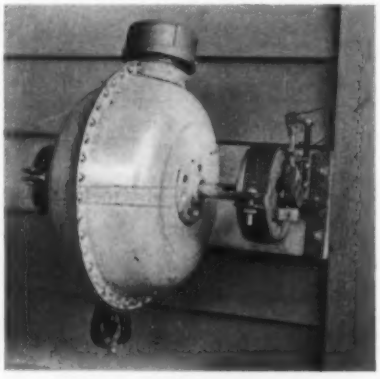
A new type of hose coupling which, at option, may be regulated to drain the flow of water through cored lugs in the coupling, is being made by the Akron Brass Manufacturing Company, Wooster, Ohio. It is the same as the company's standard conventional coupling, except that the female lug has been made a trifle wider, and the interior of the lug has been cored out to permit water to pass out underneath, as illustrated.

Parts of the Hose Coupling, with Arrows Pointing to the Drain Ports

The makers point out that with these couplings, it is possible to carry a hose line up a ladder without shutting down the pumper, as the water will flow out through the lugs, and the hose will be limp. The drain ports are opened by turning the coupling a small turn. When tightened, the water flows through and out of the nozzle. The discharge orifices of the lugs are of such size as to discharge about 90 g.p.m., through each coupling female, and the water is discharged parallel to the hose line surface so that there is no splash towards the firemen.

Automatic Fire Extinguisher

Patents have been granted to Harry D. Cooper, Poughkeepsie, N. Y., for a type of automatic fire extinguisher which contains a charge of carbon tetrachloride or other extinguisher medium, and which discharges the contents by means of a spinning action when a fuse melts.



Automatic Fire Extinguisher

The normal position is with the filler cap on top. The can rotates about the horizontal axis, causing the fluid to be discharged over a wide area.

In its normal position, the filler end is nearest the ceiling, as illustrated. The container is rotated against the pressure of a spring and is prevented from unwinding by means of a latch.

When a fusible link melts, the catch is released and the can spins causing the fluid to discharge. A spray is expelled over a large area. The container can be made to hold any amount of liquid.

It can also be made to operate with a carbon dioxide cartridge, so that when the link is fused, a plunger will pierce the cartridge, followed by the spinner action.

New Hampshire Chiefs Meet

George O. Mansfield, Chief Inspector in the Fire Marshal's Division of the Massachusetts Department of Public Safety, was the principal speaker at the fall meeting of the New Hampshire Fire Chiefs' Club which was held on October 13 in Lebanon. Chief Willis F. Hough, Lebanon Fire Department, welcomed the visiting Chiefs. It was voted to hold the three winter sessions of the club in Concord.

HARRY BELKNAP.

2-Way Radio for N. Y. Chiefs

At a dinner of the Associated Police Communication Officers, Police Commissioner Lewis J. Valentine, New York City, revealed that two-way radio sets would soon be installed in the automobiles of Chief John J. McElligott, his assistant and Deputy Chiefs. Recently the Fire Department installed two-way radio sets on all the fireboats.

At present the officers have radio sets operating through the police system.

G. E. Weber, N. Y. C., Dead

Gerhardt E. Weber, Deputy Chief, New York Fire Department, died on November 8 at his home as the result of a heart attack. He was sixty-six years old and had been on sick leave for a week. He was second in command of the Second Division of the Bronx.

He joined the department on June 1, 1894. From 1913 to 1930 he was Battalion Chief in West Harlem, and was advanced to Deputy Chief on January 1, 1930.

Chief Weber was a member of the Chief Officers' Association, the Firemen's Cycle Club, and the Fire Department Holy Name Society. He is survived by his widow, two brothers and a sister.

Fire Prevention Group Meets

The October meeting of the Massachusetts Fire Prevention Association was held in the laboratory of the Inspection Department of the Associated Factory Mutual Fire Insurance Companies on High Street, Boston.

President Joseph McCarthy of the association introduced Harold S. Walker, of the Factory Mutual, who in turn presented O. W. Stewart, General Manager, and A. L. Brown, Chief Engineer. Mr. Stewart told of the functions of the Inspection Department, and Mr. Brown conducted some interesting experiments.

Visits were made to the new building of the Boston Automatic Fire Alarm Company, and to the Factory Mutual Laboratories where an inspection was made of the testing devices and other equipment.

HARRY BELKNAP.

Apparatus Overturns on Way to Fire

An officer and four firemen were injured when a hose car in which they were speeding to a fire at Seattle, Wash., overturned, snapped off a pole, and crashed into a pile of dirt. Two men were rushed to the hospital, and the others escaped with minor injuries.

The left rear wheel of the truck slid off as it was making a turn. The truck smashed into the pole, snapped it off, and careened into a pile of dirt, where construction work was in progress.

AFTER all, a good badge is a sensible investment. Not everyone can wear a fireman's emblem of service. You men who have devoted your lives to saving life and property should be proud of your badge.

You will be if you wear a BRAXMAR BADGE. Over fifty-five years of experience goes into every badge you buy.

Catalog on request.

C. G. BRAXMAR CO., 242 West 55th Street, New York

BRAXMAR BADGES

Standard for Over Fifty-Eight Years

UNION MADE

Signal FIREMEN'S UNIFORM **SHIRTS**

Styled Right—Priced Right

Cut full and roomy. Guaranteed not to shrink. Choice of medium blue, heavy fine yarn, fast-color sanforized chambray or navy blue tub-test percale. Two popular styles, Soft Collar Attached or Neckband with two Detachable Collars.

SPECIAL OFFER
To Fire Chiefs

If you are interested in a standardized uniform shirt for your department and your dealer cannot supply Signals, write us. Give us size and style preferred and we will submit a sample shirt prepaid for your inspection and quote prices.

JOHN RISSMAN & SON
SIGNAL SHIRT DIVISION
305 W. Adams St. Chicago, Ill.

The **SEALAND CORPORATION**
FIRE CONTROL PRODUCTS

MOTOR FIRE APPARATUS
WATEROUS PUMPS
GARRISON ALARM SYSTEMS
Automatic — Supervisory — Manual

544 IRANISTAN AVENUE
BRIDGEPORT, CONNECTICUT

THE modern pumping engine has many advantages, including better and more powerful motors—better transmissions—better axles—four-wheel brakes—better engineering and, finally, better pumps—far better if it carries a Hale pump.

HALE FIRE PUMP CO., Inc.
CONSHOHOCKEN, PA.

ELK HART

A PARTIAL LIST OF ELKHART PRODUCTS

Shut-Off Nozzles
Controlling Nozzles
Turret Pipes
Fire Department Extinguishers
Extinguisher Holders
Fire Truck Body Fittings
Hose House Equipment
All Types Hose Couplings
Sliding Poles, Railings and Canopies
Fog Nozzles
Hose Test Pumps
Threading Tools
Coupling Expanders
Pump and Hydrant Valves
Hose Racks and Cabinets
Siamese Connections
Underwriters' Industrial Extinguishers

34 years service in the fire field

•

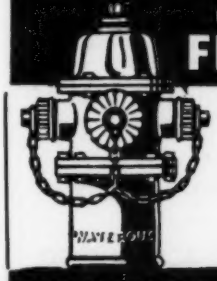
Prompt service Quality products

•

Send for illustrated folder on the New Elkhart Mystery Nozzle.

ELKHART BRASS MFG. CO.
ELKHART, INDIANA

WATEROUS
COMPRESSION
FIRE HYDRANTS



Waterous Dependable
ESTABLISHED 1886

WATEROUS COMPANY - ST. PAUL

MODERNIZE YOUR APPARATUS WITH THE

MORROW CAB FRONT WINDSHIELD

Designed by aeronautical engineers to meet specific requirements of firemen

The width and extension aft of the wings completely deflects air blasts from the seat, providing a condition similar to that of an enclosed cab.

Constructed of body steel, with safety glass panels and chrome plated hand holds. Available to fit your apparatus, and can be installed by one man in two to four hours. $110 F.O.B. Detroit.

MOORE MEIGS

1401 EAST JEFFERSON AVE. DETROIT, MICH.

EXCLUSIVE TERRITORY AVAILABLE FOR DEALERS

CAIRNS LOW HEAD— CUSHION LINED HELMET

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

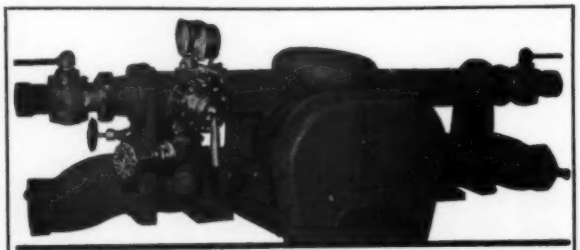
Never go to a fire without the protection of a good helmet. It may save your life.

DESIGN - - MATERIALS - - CONSTRUCTION
ALL PROVED RIGHT BY YEARS OF ACTUAL USE

Ask for Catalog 229

CAIRNS & BROTHER

444 LAFAYETTE STREET - Established 1836 - NEW YORK



NORTHERN PUMP COMPANY

ESTABLISHED 1907

MINNEAPOLIS, MINN.

STERLING JUNIOR NO. 20 SIRENLITE

Clears the Way!

Automatically flashes off and on rapidly, assures quick traffic clearance. Durable and efficient. Chrome finish. Guaranteed. Only $49.50.

Scientifically designed reflector and diffusing lens in projector.

Send for folder and full details

STERLING SIREN FIRE ALARM CO., INC. Rochester, N. Y.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933, of FIRE ENGINEERING, published monthly at New York, N. Y., for Oct. 1, 1937.

State of New York } ss.:
County of New York }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared I. H. Case, who, having been duly sworn according to law, deposes and says that he is the business manager of FIRE ENGINEERING and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York, N. Y.; Editor, Fred Shepperd, 24 West 40th St., New York, N. Y.; Managing Editor, Fred Shepperd, 24 West 40th St., New York, N. Y.; Business Manager, I. H. Case, 24 West 40th St., New York, N. Y.

2. That the owner is: Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York, N. Y. I. H. Case, 24 West 40th St., New York, N. Y. Fred Shepperd, 24 West 40th St., New York, N. Y. Karl M. Mann, 24 West 40th St., New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

I. H. CASE,
Business Manager.

Sworn to and subscribed before me this 1st day of October, 1937.

[Seal]

ELLEN E. DUNCANSON,
Notary Public.

(My commission expires March 30, 1938.)

CRACKERJACK FIRE HOSE

The hose with an unsurpassed reputation for QUALITY and SERVICE that has made it the STANDARD OF THE WEST for over 25 years.

◆

COMPLETE INFORMATION UPON REQUEST

◆

THE AMERICAN RUBBER MANUFACTURING CO.
OAKLAND, CALIFORNIA
Dealers in All Parts of the Country

E. A. Sullivan, Hartford, Dead

Edward A. Sullivan, Superintendent of Fire Alarms and for 34 years a member of the Fire Department at Hartford, Conn., died at his home in that city, October 12. He was 62 years of age. Superintendent Sullivan joined the Hartford Fire Department as a substitute on September 15, 1902, at the age of 27. In 1903 he was made Assistant Superintendent of the Fire Alarm Service and elevated to the Superintendency in 1919, when the late George W. Hamilton retired. Superintendent Sullivan held the record of being an executive officer in the Hartford department from the time he became a regular fireman and served longer in an executive position than any other city employee.

His special charge was keeping the fire and police signal system of both the Fire and Police Departments of Hartford running efficiently. During his service the fire alarm system was developed to five times its original size. When Mr. Sullivan was made Superintendent of Alarms the system had no central station to control the transmission of alarms. Seven months after he became head of the alarm division, the central station was established.

Superintendent Sullivan was a member of the Hartford Lodge of Elks, Knights of Columbus and the Fraternal Order of Eagles. He was also a charter member of the New England Municipal Signal Association and one of its past-Presidents.

He leaves his widow, Mrs. Anna M. Sullivan: a daughter, Elinor; two sons, Philip and Edward A. Sullivan, Jr., a brother and three sisters. The funeral was held on October 15 from the Church of St. Lawrence O'Toole, with interment in Mt. St. Benedict Cemetery. Among the fire alarm officials from other cities in Connecticut who attended the funeral were J. J. Roche, New Haven; Frederic G. Anderson, Bridgeport; Charles Zimmer, Meriden; Leon Toczko, New Britain; Russell A. Glenn and Leroy Morris, Bridgeport, and Fire Chief Lawrence E. Reif of New Haven.

THOMAS F. MAGNER.

Dwelling Fires Considered by Westchester Chiefs

After the summer interval, the Fire Chiefs' Emergency Plan of Westchester County, N. Y., met at the Fairview Fire Headquarters, near White Plains, on Wednesday evening, October 20, with 85 present. An instructive paper on "Dwelling Fires" was read by Chief Richard LeVino, Town of Mamaroneck Fire Department. Chief LeVino treated of the various hazards to be met in residences and the best methods of coping with them. He emphasized the danger of wooden shingle roofs in the spread of fires in dwellings. The first duty of the Fire Department at a dwelling fire is to see that all the occupants are rescued and that there are no persons overcome by smoke left in the building. In extinguishing the fire, 1½-inch hose should be used where possible and covers spread, to avoid damage by water. Care must be exercised in overhauling to avoid a rekindle of the blaze. The paper treated the subject in an exhaustive manner.

Sympathy was sent to Ex-Chief James J. Mulcahey in the death of his brother, and also to Chief James Sullivan, Greenwich, Conn., for his recent illness. Captain William S. Cashman, Fire Patrol No. 6, New York City, was called upon by President Woolley, and presented with an honorary membership card. Captain Cashman extended an invitation to all of the members to attend the School of Salvage at his Patrol House, 276 East 156th Street, Bronx, and said that they might expect to do some strenuous work in learning the science of fire patrol.

Eight new members were elected to membership in the Plan. Among the visitors at the meeting was Harry Minford, President, Rockland County Firemen's Association.

Refreshments were served by the local department after the meeting.

Summit County Firemen Meet

New features of fire control were explained to members of the Summit County Firemen's Association by T. Alfred Fleming, the National Board of Fire Underwriters, at a meeting held at Sandy Beach, Akron, Ohio, on October 12.

H. C. Atkinson, Secretary, Akron Chamber of Commerce, spoke on "Civic Interest and Fire Prevention."

Present at the meeting were members from departments of Youngstown, Cleveland, Canton, Barberton, and Ravenna—in all an attendance of 150 persons. Refreshments were served following the talks.

Joe Cook Entertains Chiefs

Members of the Fire Chiefs' Club of Rhode Island, their ladies and guests, were entertained at the second annual Ladies Night, and the first gathering after the summer recess, held at the Narragansett Hotel, Providence, October 14. Frank Charlesworth, State Fire Marshal, presided at the meeting, at which 225 persons were present.

Following the dinner, memorial service was held for the following members who passed away during the past year: Harry R. Howe, Ex-Chief Daniel A. Masterson, Henry Hulmes, Jr., and Frank A. Chapman.

George O. Mansfield, Chief Fire Inspector, Massachusetts State Police, gave an illustrated talk on how evidence is gathered and how convictions are obtained in arson cases. He was followed by Joe Cook who gave a burlesque on an arson timing device, and also an amusing talk on his experiences as an after-dinner speaker. He was followed by other entertainment, and dancing.

Louis W. Capelli, Secretary of State, represented Gov. Robert E. Quinn.

Action to form a ladies auxiliary of the club was tabled to the next meeting.

A. ROBERT BLACK.

District Chief Killed in Crash

George Ehmann, District Chief of the Toledo, Ohio, Fire Department, was killed almost instantly when the car in which he was responding to a fire was struck by another car which failed to heed the warning siren on the Chief's car. His driver received internal injuries, while the driver of the other car received fractured ribs.

The motorist had the right of way as he was driving east. He said he approached the intersection at about twenty miles an hour. The Chief's car was traveling south. When the two cars met, the department car bounded up on the sidewalk and into a building. The Chief was thrown from the car and received a fractured skull. The other car swerved around in a southerly direction and struck another car moving north.

District Chief Ehmann was born March 15, 1889, and was appointed to the department on February 10, 1912. He was made a Lieutenant on October 16, 1918, a Captain on March 1, 1920, and a District Chief on December 1, 1927.

He is survived by his widow and a son.

Fire Prevention Code of Berkeley, Cal.

A fire prevention code, that covers in great detail the provisions to be followed for the betterment of fire prevention, has been published by the city of Berkeley, Cal. It consists of fifty printed pages.

New Squad Truck for New Brunswick, N. J., Department

New Brunswick, N. J., is provided with a new squad truck. This unit is equipped with three portable Crouse-Hinds floodlights and a portable Homelite generator.

Small Hose for Baltimore

To reduce water damage, Baltimore has introduced 1½-inch hose into use on residential engine companies. The "big line" is still laid from plug to building. Then if the fire is moderate in size a reducer is attached and 1½-inch hose stretched into the building. Since only one man is required to handle the line, this releases other men for ventilation and other duties. OTIS SMITH.

Proves Design of Centrifugal Pumps

An interesting demonstration was made at the International convention in Oklahoma City to demonstrate the advance that has been made in the design of centrifugal pumps to make them more dependable for fire service under all conditions of operation.

At the exhibit of the American-La France & Foamite Industries, Inc., the pump of a Metropolitan pumper was connected to an electric motor which operated the centrifugal pump at 1,750 r.p.m.

This demonstration was supervised by the following Chiefs: Ray Tiller, Waterloo, Ia., Chairman of the Exhibit Committee; Joe C. Dobson, Keokuk, Ia.; E. A. Bromley, Greeley, Col.; George P. McGillan, Appleton, Wis.; Leo Urbanski, St. Joseph, Mo.

A test with the pump running dry to show that no damage occurred to the packings or bearings was started on Tuesday, October 19 at 9:15 a.m. The pump ran continuously for fifty-three hours in the dry condition and the test was concluded at 2:15 p.m., Thursday, October 21. The purpose of this test was to show that no damage would result should the pump lose its prime from a restricted suction strainer or an air leak in a suction hose gasket or should an operator attempt to prime the pump with an open drain valve or discharge gate.

At the adjournment of the afternoon session of the convention the pumper was driven to Headquarters Fire Station where it was operated from draft with a ten-foot lift, proving that neither packings nor bearings had been affected by the long period of dry operation.

An interesting, but unintentional part of the demonstration at the fire station occurred when the pump first drafted water in about six seconds but lost its prime, and the trouble was found to be an air leak between the two lengths of suction hose. The pump ran for several minutes before this leak was discovered and as soon as the couplings had been tightened up the pump made several demonstrations of its ability to draft water and was even primed once with a discharge gate fully opened.

Pirsch Ladder Tested

On September 27 a demonstration was given of the new 100-foot Pirsch ladder truck of the Somerville, Mass., Fire Department. Invitations were sent to officials of adjoining towns to witness the test of this handsome new truck and a collation was served in the Broadway fire house. Mayor Leslie Knox and Chief John C. McNally spoke briefly.

HARRY BELKNAP.

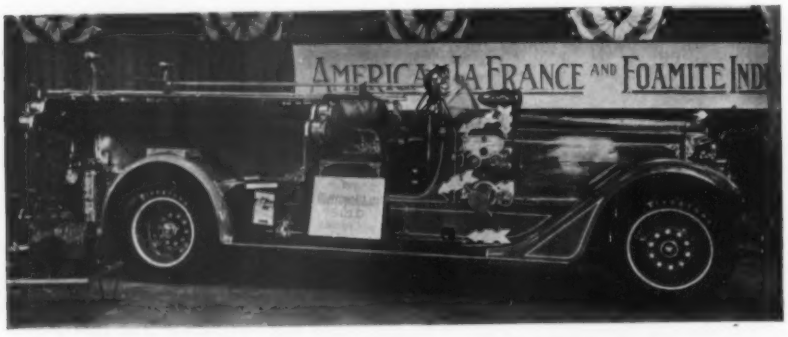
Small Fireboats for Smaller Cities

In an article on "What Trend in Fire Boats?" in the October issue of FIRE ENGINEERING, there was a statement credited to Deputy Chief A. J. Mullaney, of Chicago, to the effect that he favored smaller size fireboats as being better equipment than the size commonly found in large seaport cities.

He has advised that it has never been his thought to recommend 3,000-gallon boats for large seaport cities. In fact, Chicago, a non-seaport city, he said, recently launced a 90-foot boat.

What Chief Mullany did say was as follows:

"From the standpoint of practicability, I would say that if properly designed somewhat along the lines of our new boat, a smaller boat would serve an excellent purpose, especially in the smaller cities, where the restricted initial cost and upkeep would be a problem. Such a fireboat, if properly designed, would serve in various capacities such as dock and piling fires, fires in boats on rivers and harbors and also fires in buildings located along river banks. A fireboat of 3,000 g.p.m., of proper hull construction and design, to my way of thinking, would efficiently serve the purpose in ninety-five per cent of such fires."



American-LaFrance Pumper Exhibited and Tested at Convention

Chiefs' Plan Meets in West Haven

The largest crowd since the organization of the New Haven County Fire Chiefs' Emergency Plan attended the meeting of that organization held October 19 in the quarters of the Prospect Beach fire station on Ocean Avenue, West Haven. Chief John Pachl, Annex Fire Department, presided. The members were welcomed by Chief Edward Granfield, West Shore Company, who introduced the members to Chairman John McClellan and Fire Commissioner Charles Ryan.

A representative of the Rockwood Sprinkler Company presented a talking picture of the maintenance and operation of that company's sprinkler system which proved educational to the members present. Francis E. Ingals, Guilford, who owns and operates his "one man fire department" at Chaffinch Island, exhibited a talking picture of the pine forests in Oregon, which showed how the forests in that state are protected against fire and he showed views of the many operations in the lumber industry in Oregon.

The principal speaker of the evening was Ex-Chief Arthur F. Bell, formerly in charge of the drill school and fire college in Jersey City, N. J., and now Chief Instructor on fire administration of the Fire Departments in Nassau County, Long Island. Ex-Chief Bell gave a very interesting and instructive talk on "Fires in Frame Buildings." He was made an honorary member of the Plan.

Through the courtesy of Chairman McClellan, motion pictures of last year's football game between Yale and Princeton were shown. An invitation was read from Chief "Jim" Brett, Ansonia Fire Department, to hold the next meeting at Ansonia. It was voted to hold the meeting there.

THOMAS F. MAGNER.

New Fire House for New Canaan

Work will be started on a $45,000 fire house for New Canaan, Conn., to be located across from the Town Hall. It will follow the Georgian style of architecture, and will have four doors leading from the apparatus floor.

The building will have an apparatus room, reading room, meeting hall, workshop, dormitory, Commissioner's room, game room, dining room, and a receiving officer's room.

Chiefs Enjoy Old Relics Night

"Old Fire Relics" Night was observed by the Middlesex County Forest Fire Wardens' Association on October 21, in fire headquarters, at Melrose, Mass. Each member was asked to bring to the meeting some memento of bygone days in the fire service. Old leather buckets, chief officer's staffs, old fire belts, pictures of ancient apparatus, a bed key and salvage bag, red shirts of volunteer days, and several old play pipes were included in the souvenirs exhibited.

President John Campbell had charge of the meeting. Chief Frank Newman, of the Melrose Fire Department, acted as host and gave an exhibition of the Pirsch 100-foot aerial ladder truck of the Melrose department.

Speakers included Commissioner Ernest J. Dean, Massachusetts Department of Conservation; Maxwell C. Hutchins, State Fire Warden; Chief Frank Tracy, Woburn; Chief Warren H. Belcher, Winthrop; Chief Harold Conron, North Reading; Chief Hugh L. Eames, Reading; Chief Irving Waite, Bedford; and Chief David DeCourcy, Winchester.

HARRY BELKNAP.

INDIAN FIRE PUMPS

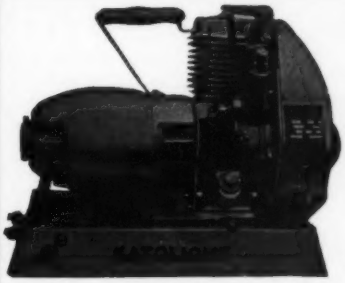
WRITE FOR CATALOG, TESTIMONIALS AND PRICES TODAY!

D. B. SMITH & CO., UTICA, NEW YORK

For Fires in Oil, Gasoline, Lacquer, Alcohol, Solvents and Fires in Electrical Apparatus

LUX CARBON DIOXIDE FIRE EXTINGUISHERS

Walter Kidde & Company, Inc.
410 West St., Bloomfield, N. J.



110 VOLTS A. C.
Anywhere

For Operating
FLOOD LIGHTS, PORTABLE SAWS, DRILLS, etc.

350-Watt AC Katolight, Jr., $89.60
Fully Portable,
Only 55 pounds

550-Watt AC Plant, $130.00
Only 84 pounds

Gas-Engine AC & DC Plants up to 10,000 Watts AC & DC Generators
Engine-driven 6 & 12 volt Battery Chargers
Write for circulars and Discounts

KATO ENGINEERING COMPANY
MANKATO, MINNESOTA, U. S. A.

HEWITT-GUTTA PERCHA FIRE HOSE

A complete line, including
Wax Treated - Solid Multiple Woven
AND
Single and Double Jacket Hose

Manufactured by
HEWITT RUBBER CORPORATION
BUFFALO, N. Y.
"Territories Available"

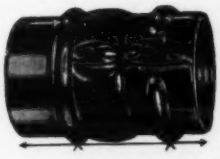
HILL FIRE APPARATUS BELLS

Price List on request.

Loudest, clearest toned bell on the market as a result of years of experience in the manufacture of quality bells for the fire service.

N. N. HILL BRASS CO.
EAST HAMPTON, CONN.
STANDARD OF THE FIRE SERVICE FOR GENERATIONS

This is the new LIGHT WEIGHT BI-LATERAL FIRE HOSE



This hose will stand 900 pounds pressure and weighs but 45 pounds to the section uncoupled.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze), with the swivel-protecting feature.

This coupling will stand several expansions and can be used over and over again, saving your city at least 20c to 30c per foot on future hose purchases.

When in the market, let us show you that we can give you the best service obtainable for the least money.

BI-LATERAL FIRE HOSE COMPANY
20 N. Wacker Drive **Chicago, Illinois**

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

You'll Feel
A HEAP SAFER
with
COVER'S DUPOR CHARCOAL RESPIRATOR

$48 Dozen
Sample: $4 postpaid

H. S. COVER
Station A
South Bend, Indiana

U. S. Patent No. 2,065,304
Other Patents Pending

FALSE ALARMS

SLIGHTLY DAMP

It was a tough fire to fight, and a number of large streams were being used. To make matters worse, a wind was blowing in the direction of some of the firemen, so that the streams, in part, were carried back in a fine spray. Two firemen had been holding a line for some time. The Captain approached to see how the men were making out.

Through the fog, the two hosemen could make out another form approaching.

One yelled out, "Who goes there?"

"Captain Flannigan."

"Good. Welcome to our mist."

Modesty has ruined more kidneys than bad liquor.

HIS METHOD

A fireman was leaning against the iron chain strung against the door of the apparatus room. He was very much interested in a little fellow, dragging a wagon, and crying as though his heart would break.

"That's not like a man," said the firefighter, "I wouldn't cry like that."

The little fellow looked up for a moment.

"Cry as you please. This is my way."

When he read about Latin syntax, he figured that they had to pay for their fun, too.

OBEYED ORDERS

The rookie came back to the station, very much excited.

He remarked to his friend, "If that guy they call the Drillmaster don't take back what he said to me, I'm getting out."

The friend appeared puzzled and asked:

"What did he say?"

"He said, 'Get the hell out of the fire service.'"

The latest name for baby pigs is hamlets.

WASTED EFFORT

The instructor at the drill school was demonstrating at the blackboard the solution of a mathematical problem. Most of the blackboard was covered with figures, equations and square root signs.

At last the instructor took a deep breath, and proudly summed up his demonstration with, "And so we find that x equals zero.

A fireman nudged his neighbor and in a very disgusted tone remarked, "All that work for nothing."

The chorus girl commented on the fried potatoes on her plate: "In your mouth a few minutes, in your stomach a few hours, and on your hips for the rest of your life."

NO GO

It was his first experience with a modern hostelry. Coming back to the hotel after a night of theatre and drinking, he went to his floor and then 'phoned down to the desk clerk.

"Dammit, I can't sleep."

"What's the trouble," asked the clerk, "too much noise?"

"No, but I can't sleep."

"Is something wrong with the bed, sir?"

"No, but I can't sleep."

"Well, sir, what can I do for you? Shall I send up some sleeping potion?"

"Hell, no; just send up the key to my room. I'm locked out."

The world's fair will be held in New York in 1939 and also around the waist as usual.

ELEVATED POST

It was a big fire and a rather cold night. A large crowd collected to watch the firemen at work and to enjoy the excitement of the flames.

There was one fellow in the crowd who did not depend upon excitement to keep him warm. He had a bottle with him and during the course of the fire, he emptied it. After the fire was out and the crowd had dispersed, he still remained.

He was very much puzzled when he saw the reflection of the full moon in a puddle of water at his feet. He asked some one, as he pointed at the puddle:

"Is that the moon?"

"Yes," answered the other.

The drunk became alarmed.

"Then what the hell am I doing up here?"

Said the angry wife, "Now that I have a Frigidaire, see what you can do about a mechanical stenographer."

ANYWAY, A FIGHT

There are some pretty trying moments for those stationed in fire houses in suburban towns. In this community, being a volunteer fireman was the proper thing. To this company belonged a number of the town's people and several of the social summer residents.

When open house was held to celebrate the dedication of a new pumper, many of the socially prominent attended. A department officer was showing a fair young debutante and her mother about the building. The daughter saw one of the men decorated with a nice "shiner."

She asked with much interest, "What was the matter?"

"Oh, Gerrity had a fight."

To display her education, she asked, "What was the 'casus belli?'"

The mother was horrified.

"Maud," said the mother, "how often have I told you to say stomach?"

He calls his girl, "Baseball," because she won't play without a diamond.

THE COMPLETE GOLFER

This story comes from a Pacific Coast officer who resides in a city where golf is the proper thing for the off-duty hours.

Two rookie firemen figured that since they were now full fledged members of the fire service, they should also become well acquainted with the game of golf. They went to the city links and there debated what to do next. They were approached by a golf professional.

He asked one, "Do you wish to learn to play golf?"

"Oh, no," remarked the other. "It's my friend who wants to learn. I learned yesterday."

His favorite volume is the bank book, but even that is lacking interest.

"Da big bloke! I asts him for a smoke an' he sez, 'Ain't ya rollin' yer own?'—an' I just tumbled to wot he meant."

Ask for it..

It's FREE

As a reader of FIRE ENGINEERING you are entitled to our buyers' information service free of cost. Here is how it works.

Whenever you are seeking information about any piece of equipment or material that you are planning to buy, first look through the advertisements in this issue. They are your best guide.

Then, if you do not find what you want, just use the blank below to tell us what you need and we will see that you get the information you want.

That's all there is to it. Easy, simple, and it costs absolutely nothing.

Use the coupon—

FIRE ENGINEERING
Readers' Service Dept.,
24 W. 40th St., New York.

Gentlemen:

Please have sent to me, without obligation, information about the following items:

_____

_____

_____

_____

_____

_____

NAME .....

POSITION .....

ADDRESS .....

NOTE: The more specific you can be in detailing the items you are interested in, the more specific we can be in having the correct information sent you.

11-37

REDUCE WATER DAMAGE & INSURANCE RATES,

Shuredry SALVAGE COVERS

100% Protection with Shuredry Salvage Covers

Read what Chief Powell says:

. . . At a recent house fire of 14 rooms where the entire roof was burned off, with a $1,500.00 loss to house, our Shuredry Salvage Covers gave 100% protection to the bedrooms directly under the fire besides to all other furniture in the home. Not one cent was paid for water damage to contents.

No fire department is complete without a good supply of salvage covers, and firemen trained how to use them properly. We can always depend on our Shuredry salvage covers and are only too glad to recommend them.

Yours very truly,
R. A. POWELL, Chief
Pierre Fire Dept.
Pierre, South Dakota

Fulton Bag & Cotton Mills
Manufacturers Since 1870
ATLANTA ST. LOUIS DALLAS
MINNEAPOLIS BROOKLYN NEW ORLEANS KANSAS CITY, KAN.

FREE TO FIRE CHIEFS

Fire chiefs who are seeking increased appropriations for more fire alarm boxes or fire fighting equipment may help their cause by furnishing the Mayor of their city a copy of

"INFLATION AND FIRE CHIEFS"

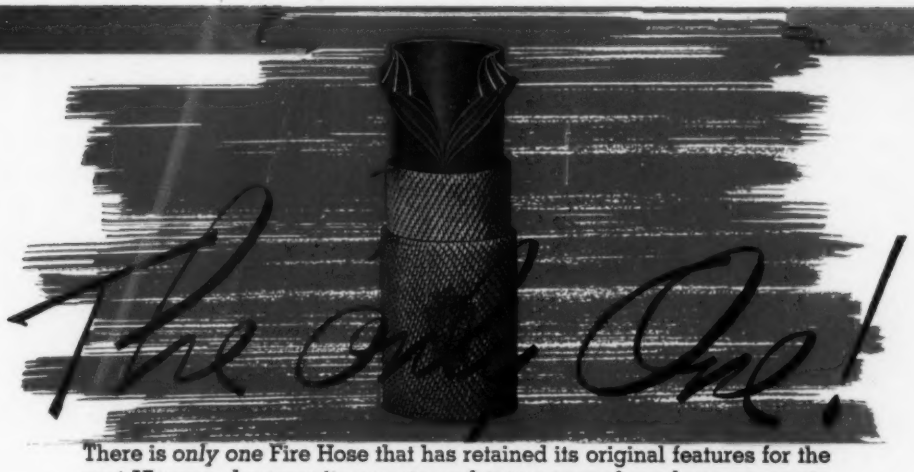
by ROGER W. BABSON as it appeared in FIRE ENGINEERING for February, 1937. Copies will be sent free to any chief who writes:

BABSON'S STATISTICAL ORGANIZATION, INC.
By ROGER W. BABSON, *President*
Babson Park, Mass.

ADVERTISING INDEX

ADVERTISING PAYS IN FIRE ENGINEERING

	Page
Ahrens-Fox Fire Engine Co.	585
Akron Brass Co.	620
American-La France Foamite Industries, Inc.	588
American-Marsh Pumps, Inc.	616
American Rubber Mfg. Co.	624
Apollo Magneto Corp.	620
Atlas Fire Equipment Co.	620
Babson, Roger W.	630
Bi-Lateral Fire Hose Co.	627
Braxmar Co., C. G.	623
Cairns & Brothers	624
Cover, H. S.	627
Eddy Valve Co.	627
Elkhart Brass Mfg. Co.	623
Eureka Fire Hose Division of United States Rubber Products, Inc.	Back Cover
Evinrude	619
Fabric Fire Hose Co.	Inside Back Cover
Federal Electric Co.	615
Fulton Bag & Cotton Mills	630
Gamewell Company	586-587
Globe Mfg. Co.	615
Hale Fire Pump Co.	623
Hewitt Rubber Corp.	627
Hill Brass Co., N. N.	627
Homelite Corp.	583
INFORMATION FOR BUYERS	629
Kato Engineering Co.	627
Kidde & Co., Walter	627
Meigs, Moore	624
Midwestern Mfg. Co.	619
Northern Pump Co.	624
Outboard Motors (Evinrude Div.)	619
Quaker City Rubber Co.	620
Republic Rubber Co.	619
Rissman & Son, John	623
Ross Valve Mfg. Co.	615
Sealand Corp.	623
Smith Mfg. Co., D. B.	627
Sterling Siren Fire Alarm Co.	624
Waterous Co.	623



There is *only* one Fire Hose that has retained its original features for the past 57 years—because its SAFETY and RELIABILITY have been proven in service. Wax and Para Gum Treated Hose has demonstrated its superiority in the nation's leading Fire Departments. Other manufacturers have imitated but never successfully duplicated Fabric Fire Hose because Fabric is the originator and patentee of the Wax and Para Gum Treatment, and is the *only* manufacturer that offers in one Fire Hose these seven outstanding features:

1 Finer grade cable-twisted yarn providing greater burst-resistance without increased weight or bulk.

2 Twill-weave construction giving more resistance to wear and abrasion ...more flexibility...lighter weight...no twisting and kinking under pressure.

3 Moisture-proof...mildew- and rot-proof...no freezing or resultant cracking.

4 A naturally smooth interior free from corrugations—hence greater pressure where you need it...at the nozzle.

5 Longer life because of Slow Aging, Scientifically Compounded Rubber Lining.

6 Smooth exterior that glides over and around sharp corners...longer useful life of jackets.

7 Easily packed...occupies less space.

Send for materials for conducting a simple test that will prove to you the superiority of Fabric Wax and Para Gum Treated Fire Hose. Fabric Fire Hose is available only through direct representatives of

FABRIC FIRE HOSE COMPANY

FACTORY • SANDY HOOK, CONNECTICUT

FOR GREATER PROTECTION TO LIVES AND PROPERTY

EUREKA Multiple Woven 4-ply Fire Hose—heavy duty—four distinct plies—all circular woven —contains smooth interior filler ply—new and improved lap-seam, long-lived rubber lining.

SPECIFY

Eureka—and only Eureka Fire Hose can deliver more pressure with greater safety for longer periods—because—Eureka, and only Eureka—has these four advantages:

(1) Multiple Woven Construction—Eliminates dangerous wriggling, writhing, serpentining under hydraulic pressure.

(2) Smooth Interior Filler Ply—Prevents "washboarding" of rubber lining. Minimizes friction loss.

(3) Bomb-Tested Rubber Lining—Long-lived . . . creates no destructive solutions.

(4) Mildew-Proofing—All fabrics antiseptically treated to prevent mildew and rot.

EUREKA FIRE HOSE

Streamlined

Division of United States Rubber Products, Inc.

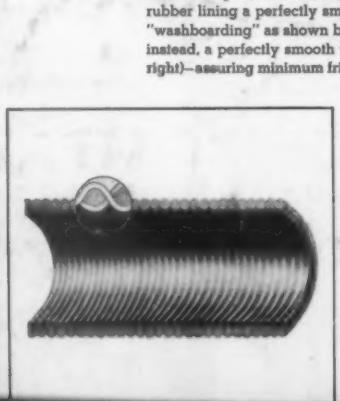
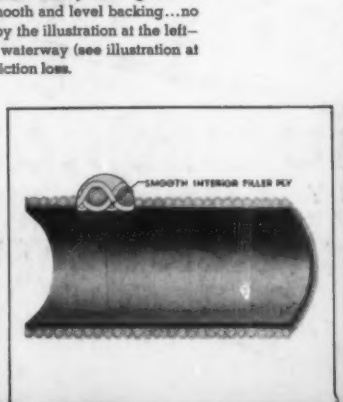
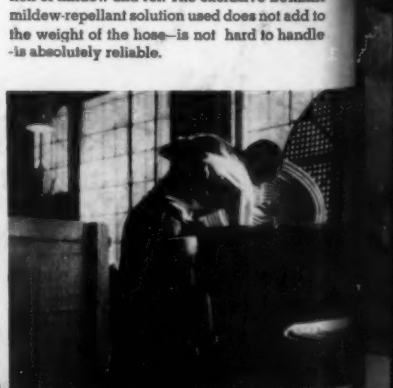
1790 BROADWAY NEW YORK, N.Y.

★ **BOMB TESTED RUBBER LININGS**

EUREKA *new* and *better* rubber lining with improved lap-seam . . . 4 plies of specially developed long-lived rubber . . . calendered into one homogeneous body . . . proved far superior by the Bomb Test—a scientific method of predetermining the aging characteristics of rubber goods.

★ **SMOOTH-INTERIOR FILLER-PLY**

An individual set of warp and weft cords that fill in the valleys in the weave of the inner jacket . . . gives the rubber lining a perfectly smooth and level backing . . . no "washboarding" as shown by the illustration at the left—instead, a perfectly smooth waterway (see illustration at right)—assuring minimum friction loss.

★ **MILDEW PROOF FABRICS**

All Fabrics used in EUREKA Fire Hose are antiseptically treated to prevent the formation of mildew and rot. The exclusive EUREKA mildew-repellant solution used does not add to the weight of the hose—is not hard to handle—is absolutely reliable.